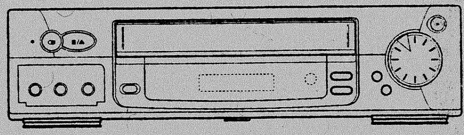
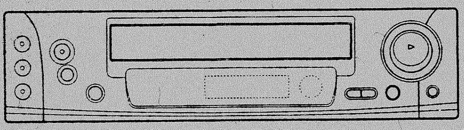
LG

VIDEO CASSETTE RECORDER SERVICE MANUAL

MODELS : N909P/N919P

CAUTION
BEFORE SERVICING THE UNIT, READ THE "SAFETY PRECAUTIONS"
IN THIS MANUAL.


N909P


N919P

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SECTION 1 SUMMARY KEY TO ABBREVIATIONS

A	AC	:Alternating Current
	ACC	:Automatic Color Control
	ACSS	:Automatic Channel Setting System
	ADJ	:Adjust
	A/E	:Audio Erase
	AFC	:Automatic Frequency Control
	AFT	:Automatic Fine Tuning
	AGC	:Automatic Gain Control
	A.H.SW	:Audio Head Switch
	ALC	:Automatic Level Control
	AM	:Amplitude Modulation
	AMP	:Amplifier
	ANT	:Antenna
	APC	:Automatic Phase Control
	ASS'Y	:Assembly
	AUX	:Auxiliary
B	B	:Base
	BGP	:Burst Gate Pulse
	BPF	:Bandpass Filter
	BS	:Brodcasting Satellite
	BW or B/W	:Black and White
C	C	:Capacitor, Chroma, Collector
	CAN	:Cancel
	CAP	:Capstan
	CAP.BRK	:Capstan Brake
	CAP.RVS	:Capstan Reverse
	CATV	:Cable Television
	CBA	:Circuit Board Assembly
	CCD	:Charge Coupled Device
	C.CTL	:Chro Control, Capstan Control
	CFG	:Capstan Frequency Generator
	CHROMA	:Chrominance
	CNR	:Chroma Noise Reduction
	COMB	:Combination Comb Filter
	COMP	:Comparator Composite Compensation
	CONV	:Converter
	C.ROT SW	:Color Rotary Switch
	CS	:Chip Select
	C.SYNC	:Composite Synchronization
	CTL DIV	:Control Divide
	CUR	:Current
	CYL	:Cylinder
D	D	:Drum, Digital, Diode, Drain
	D.ADJ	:Drum Adjust
	DC	:Direct Current
	D.CTL	:Drum Control
	DEMOD	:Demodulator
	DET	:Detect
	DEV	:Deviation
	DHP	:Double High Pass
	DIGITRON	:Digital Display Tube
	DL	:Delay Line
	DOC	:Drop Out Compensator
	DUB	:Dubbing
	D.V SYNC	:Dummy Vertical Synchronization
E	E	:Emitter
	EE	:Electric to Electric
	EMPH	:Emphasis
	ENA	:Enable
	ENV	:Envelope
	EP	:Extended Play
	EQ	:Equalizer
	EXP	:Expander
F	F	:Fuse
	FB	:Feed Back
	FBC	:Feed Back Clamp
	FE	:Full Erase
	FG	:Frequency Generator
	FL	:Filter
	FM	:Frequency Modulation
	F/R	:Forward/Reverse
	FS	:Frequency Synthesizer
	FSC	:Subcarrier Frequency
	F/V	:Frequency Voltage
G	GEN	:Generator
H	H	:High, Horizontal
I	IC	:Intergrated Circuit
	IF	:Intermediate Frequency
	INS	:Insert
L	L	:Low, Left, Coil
	LD	:Loading
	LD VTG CTL	:Loading Voltage Control
	LECHA	:Letter Character
	L.M	:Level Meter
	LP	:Long Play
	LPF	:Low Pass Filter
M	MAX	:Maximum
	MD	:Modulator
	MECHA.CTL	:Mechanism Control
	MIC	:Microphone
	MIN	:Minimum
	MIX	:Mixer, Mixing
	M.M.	:Mono Multi Vibrator
	MMV	:Monostable Multivibrator
	MOD	:Modulation, Modulator
	MODEN	:Modulation-Demodulator
	MPX	:Multiplex
N	NR	:Noise Reduction
O	OSC	:Oscillator
	OSD	:On Screen Display
P	PB	:Playback
	PCB	:Printed Circuit Board
	P.CTL	:Power Control
	PER-AMP	:Preamplifier
	P.F	:Power Failure
	PG	:Pulse Generator
	PLL	:Phase Locked Loop
	PREM.DET	:Premire Detect
	P-P	:Peak to Peak
	PS	:Phase Shift
	PWM	:Pulse Width Modulation
	PWR CTL	:Power Control
Q	Q	:Transistor
	QH	:Quasi Horizontal
	QSR	:Quick Set Record
	QTR	:Quick Timer Record
	QV	:Quasi Vertical
R	R	:Resistor, Right
	RE(or RC)	:Remocon, Receiver
	REC	:Recording
	REC S.'H'	:Record Start 'Hight'
	REF	:Reference
	REG	:Regulated, Regulator
	REMOCON	:Remote Control(unit)
	RF	:Radio Frequency
	R/P	:Record/Playback
	RTC	:Reel Time Counter
S	S	:Serial
	S.ACCEL	:Slow Accel
	SAOP	:Second Audio Program
	SC	:Scart, Simulcast
	S.DET	:Secam Detect
	SH	:Shift
	SHARP	:Sharpness
	SIF	:Sound Intermediate Frequency
	SLD	:Side Locking
	S/N	:Signal to Noise Ratio
	SP	:Standard Play
	ST	:Stereo
	SUB	:Subtract, Subcarrier
	SW or S/W	:Switch
	SYNC	:Synchronization
	SYSCON	:System Control
T	T	:Coil
	TP	:Test Point
	TR	:Transistor
	TRK	:Tracking
	TRANS	:Transformer
	TU	:Tuner, Take-Up
U	UHF	:Ultra Hight Frequency
	UNREG	:Unregulated
V	V	:Volte, Vertical, Video
	VA	:Voltage Alive
	VCO	:Voltage Controlled Oscillator
	VGC	:Voltage Gain Control
	VHF	:Very High Frequency
	V.H.SW	:Video Head Switch
	VISS	:VHS Index Search System
	VPS	:Video Program System
	VR	:Variable Resistor or Volume
	V-SYNC	:Vertical Synchronization
	VTG	:Voltage
	VV	:Video to Video
	VXO	:Voltage X-tal Oscillator
W	W	:Watt
	WHT	:White
	W/O	:With Out
X	X-TAL	:Crystal
Y	Y/C	:Luminance/Chrominance
	YNR	:Luminance Noise Reduction
Z	ZD	:Zener Diode

IMPORTANT SAFETY PRECAUTIONS

Prior to shipment from the factory, the products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

• Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.
2. Parts identified by the ⚠ symbol and shaded (▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.
3. Use Specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistor
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.(Fig. 1)
6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. When a power cord has been replaced, check that 10-15Kg of force in any direction will not loosen it.(Fig. 2)
9. Also check areas surrounding repaired locations.
10. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the parts specified. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

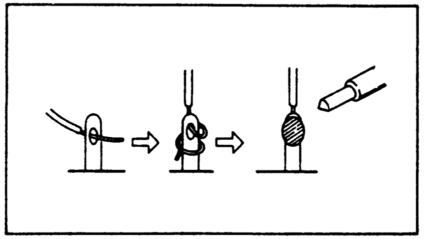


Fig. 1

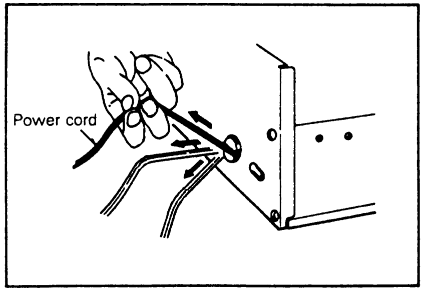


Fig. 2

SAFETY CHECK AFTER SERVICING

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

• Insulation resistance test

Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table below.

• Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set(RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table below.

• Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table below.

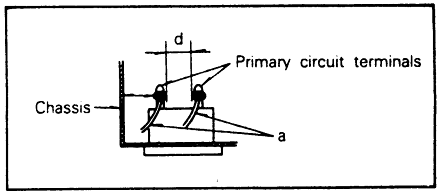


Fig. 3

Table 1:Ratings for selected areas

AC Line Voltage	Region	Insulation Resistance	Dielectric Strength	Clearance Distance(d),(d)
*110 to 130 V 200 to 240 V	Europe Australia	≧10 MΩ/500 V DC	4kV 1 minute	≧6mm(d) ≧8mm(d) (a Power cord)

*Class II model only.

Note. This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

• Leakage Current test

Confirm specified or lower leakage current between B(earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.)

Measuring Method: (Power ON)
Insert load Z between B(earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure and following table.

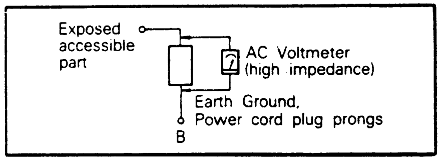

Exposed accessible part
AC Voltmeter (high impedance)
Earth Ground, Power cord plug prongs
B

Fig. 4

Table 2:Leakage current ratings for selected areas

AC Line Voltage	Region	Load Z	Leakage Current(i)	Earth Ground (B) to:
100 to 130 V	Europe	2kΩ	i≦0.7m A peak i≦2m A dc	Antenna earth terminals
200 to 240 V	Australia	50kΩ	i≦0.7m A peak i≦2m A dc	Other terminals

Note. This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SPECIFICATIONS(N909P/N919P)

General

Power	100-240V~, 50Hz.
Power consumption	Approx. 19 watts(Energy Saving mode : 3 watts)
Video Head system	Double azimuth 4 heads, helical scanning system
Tape speed	23.39 mm/sec (SP mode)/11.69 mm/sec (LP mode)
Tape format	Tape width 1/2" (12.7 mm high density VHS tape)
Maximum recording time	4 hours in SP mode/8 hours in LP mode (with E-240 tape)
Rewind time	Approx. 150 sec. (with E-180 tape)
Dimensions (W X H X D)	14.2" X 3.6" X 11.4" (360 X 92 X 290 mm)
Weight	9.0 lbs. (4.1 kg)
Operating temperature	41°F-95°F (5°C-35°C)
Operating humidity	Less than 80 %
Timer	24 hours display type

Video

Television system	CCIR standard (625 lines, 50 fields) PAL/SECAM colour signal
Recording format	PAL/MESECAM
RF reception	PAL(B/G), SECAM(B/G)
RF out	PAL G
Input level	VIDEO IN (SCART, RCA type) 1.0 Vp-p, 75 ohm, unbalanced
Output level	VIDEO OUT (SCART, type) 1.0 Vp-p, 75 ohm, unbalanced
Signal to noise ratio	More than 43 dBm
RF modulator	UHF Channels 22-68(Adjustable)

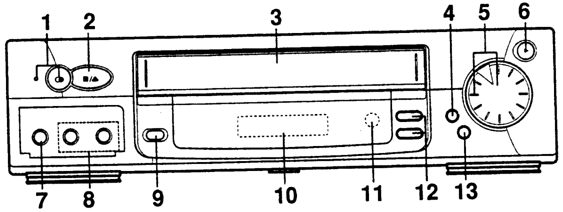
Audio

Input level	AUDIO IN (SCART, RCA type) Scart type : 0 dBm, more than 10 kΩ RCA type : -6.0 dBm, more than 47 kΩ
Output level	AUDIO OUT (SCART,RCA type) Scart type : 0 dBm, less than 1 kΩ RCA type : -6.0 dBm, less than 1kΩ
Audio track	Mono track & Hi-Fi track
Audio frequency response	Normal : 100 Hz-10 kHz (-6/+3 dBm) Hi-Fi : 20 Hz-20 kHz (-3/+3 dBm)
Audio signal to noise ratio	Hi-Fi audio : More than 75 dBm (JIS A filter)
Audio dynamic range	Hi-Fi audio : More than 80 dBm (JIS A filter)

● Design and specifications are subject to change without notice.

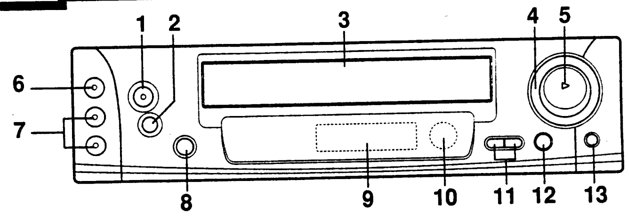
LOCATION OF CUSTOMER CONTROLS

FRONT MODEL : (N909P)



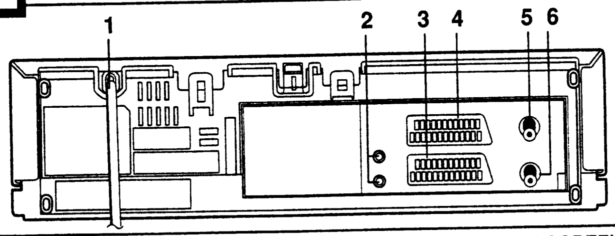
1. STAND BY
2. STOP/EJECT
3. VIDEO CASSETTE COMPARTMENT
4. P/STILL
5. SHUTTLE RING
6. PLAY
7. VIDEO INPUT TERMINAL
8. AUDIO IN (R/L) INPUT TERMINALS
9. GREEN POWER
10. MULTI FUNCTION DISPLAY
11. REMOTE CONTROL SENSOR
12. PROG. (▲/▼)
13. REC/QSR

FRONT MODEL : (N919P)



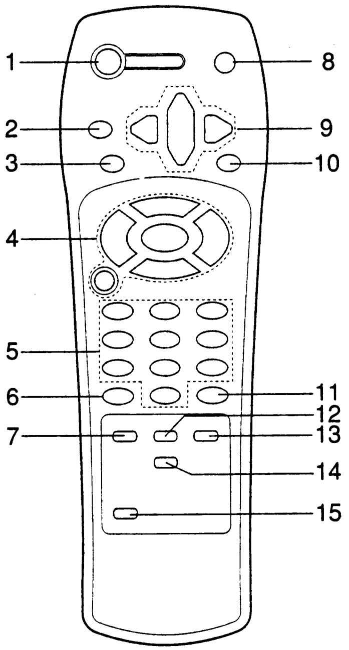
1. POWER
2. STOP/EJECT
3. VIDEO CASSETTE COMPARTMENT
4. SHUTTLE RING
5. PLAY
6. VIDEO INPUT TERMINAL
7. AUDIO IN (R/L) INPUT TERMINALS
8. GREEN POWER
9. MULTI FUNCTION DISPLAY
10. REMOTE CONTROL SENSOR
11. PROG. (▲/▼)
12. P/STILL
13. REC/QSR

REAR MODELS : (N909P/N9196P)



1. MAINS LEAD
2. AUDIO OUT (R/L) TERMINALS
3. EURO AV 1
4. PREMIERE(DECODER)
5. AERIAL
6. RF. OUT

REMOTE CONTROL



MODELS:(N909P/N919P)

1. **POWER**
2. **CLEAR**
3. **CLOCK/TAPE COUNTER**
4. **BASIC OPERATION BUTTONS**
5. **NUMBER BUTTONS**
6. **TV/VCR**
7. **SHOWVIEW**
8. **EJECT**
9. **CURSORS**
10. **i**
11. **CM SKIP**
12. **TAPE SPEED SELECT(LP)**
13. **AUDIO/VIDEO MODE**
14. **CHILD LOCK**
15. **PDC/VPS**

SECTION2 CABINET & MAIN FRAME

SERVICE METHOD

1. Electrical Part

(1) Disassembly Flow

Top Case
Bottom Cover
Front Panel
Housing & Deck Assembly
Main C.B.A
Timer C.B.A

(2) Re-assembly Flow for service like Fig.2-1

Timer C.B.A
Main C.B.A
Housing & Deck Assembly

(3) To check and replace Electrical parts

①. Disassemble the unit according to No.1) Disassembly Flow.
②. Re-assemble the unit according to No.2) Re-assemble Flow.
③. Place the unit like Fig. 2-1.
④. Check and replace Electrical parts.

Note:

①. Insert Video Cassette Tape inversely like Fig. 2-1 to check and replace defective parts.
②. In disassembling and reassembling, be careful not to damaged CST switch.

(Positioned Upside Down)

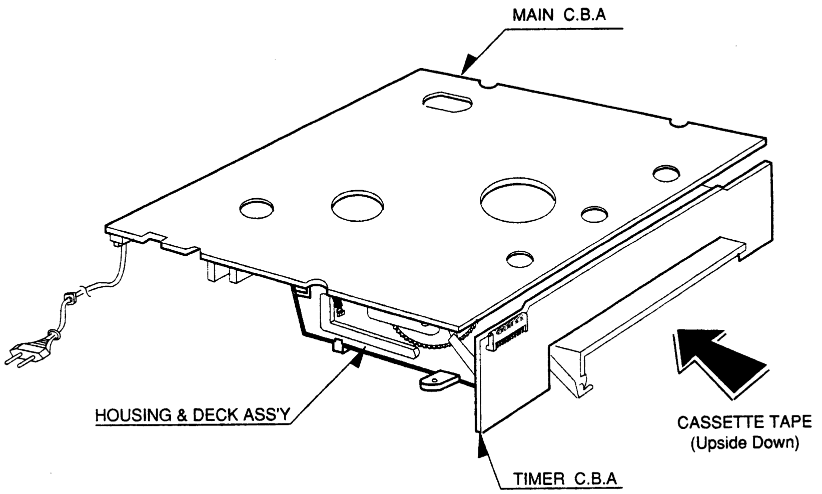
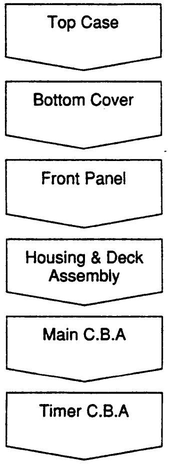


Fig. 2-1

SERVICE METHOD

2. Mechanical Part

(1) Disassembly Flow


Top Case
Bottom Cover
Front Panel
Housing & Deck Assembly
Main C.B.A
Timer C.B.A

(2) To check and replace Mechanical parts

①. Disassemble the unit according to No.1) Disassembly Flow.

②. Connect Service Extension Fixtures 4EA (EXT. ① ~ ④) and Mechanism Tables 4EA (EXT. ⑤) like Fig. 2-2.

③. Prevent the operation of Supply and T-up End Sensor and Reel sensor (Diode D607 on Main C.B.A).

④. Insert Video Cassette Tape (Then push CST switch for a moment during inserting the Tape).

⑤. Check and replace mechaical parts.

⑥. Eject the Video Cassette Tape (Then push the CST switch like above No. ④).

⑦. Open the Diode D607 mentioned above No. ③.

Note:

①. Be sure to confirm above No. ⑦ (open D607). In disassembling and reassembling, be careful not to damaged CST switch.

※ The Green line of each EXT. must be connected with No.① Pin of each connector.

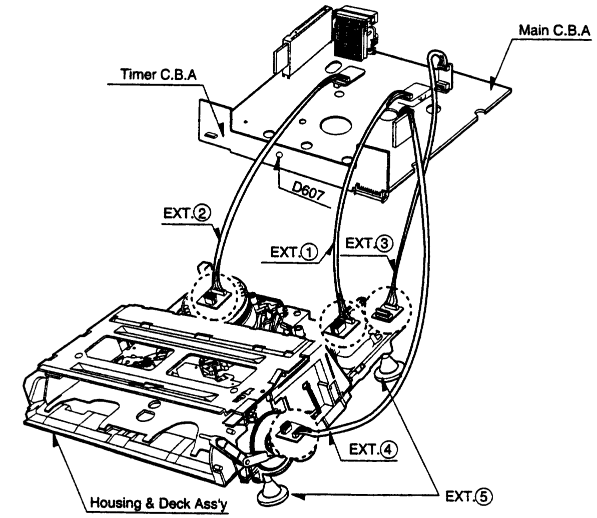
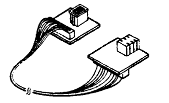
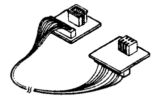
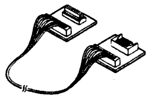
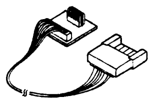
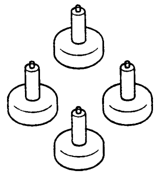
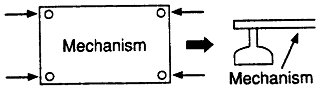

Main C.B.A
Timer C.B.A
D607
EXT.②
EXT.①
EXT.③
EXT.④
EXT.⑤
Housing & Deck Ass'y

Fig. 2-2

SERVICE ACCESSORIES

Fixture No.	Part No.	Illustration	Connection Information
EXT. ① Capstan ↕ MAIN C.B.A	6871R-0288W		MAIN C.B.A(PMD02) ↕ PD1 ↕ P1 CAPSTAN ↕ PD2 ↕ P2
EXT. ② DRUM ↕ MAIN C.B.A	6871R-0288B		MAIN C.B.A(PMD01) ↕ PD1 ↕ P3 DRUM ↕ PD2 ↕ P4
EXT. ③ A/C Head ↕ MAIN C.B.A	6871R-0288D		MAIN C.B.A(PMD03) ↕ P11 ↕ P12 A/C Head
EXT. ④ Mode Switch ↕ MAIN C.B.A	6871R-0288E		MAIN (PMD04) ↕ P10 MODE SWITCH ↕ PS1 ↕ P9
EXT. ⑤ Mechanism Table	322-065A		 Mechanism ➡ Mechanism

· Cabinet & Main Frame Section **MODEL:N909P**

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
ASSEMBLY PARTS SECTION						
		A40	315-348X	FRAME ASSY	ASSY MAIN	NSP
		A42	6871R-1099A	PWB(PCB) ASSY	TIMER	
		A43	3721R-F075N	PANEL ASSY,FRONT[NORMAL PARTS]	N909P	
		A46	3501R-1075B	BOARD ASSY	MAIN	
PARTS SECTION						
		250	3110R-0054S	CASE	TOP	
		260	315-347Q	FRAME	MAIN	NSP
		265	324-995A	HOLDER	PWB	
		268	255-359A	PLATE	SIDE GND	
		275	324-802A	HOLDER	DIGITRON	
		277	4941R-Z008A	KNOB ASSY	SHUTTLE	
		280	3720R-F045L	PANEL	FRONT	NSP
		283	3580R-0024P	DOOR	CST(N909P)	
		284	442-681A	SPRING	DOOR	
		300	6410RCH002B	POWER CORD	DW5000E(FILTER)CNT DONGWON VDE	
·	OR	300	681-051C	CORD	KKP-419J/B-172, KLCE-2F,CNT	
		309	321-714A	BRACKET	HOUSING	
		320	3721R-D012M	PANEL ASSY,DISTRIBUTOR(NORMAL	N909P HIFI-EUROAV1 2	
		323	3111R-0065A	CASE ASSY	P-AMP	
		330	220-050A	COVER	BOTTOM	
SCREW						
		452	353-051A	SCREW	SPECIAL	
		462	353-136A	SCREW	SPECIAL(FBK) (353S353A)	
		463	1MBC0302418	BINDING HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		472	353-051E	SCREW	SPECIAL (3X12)	

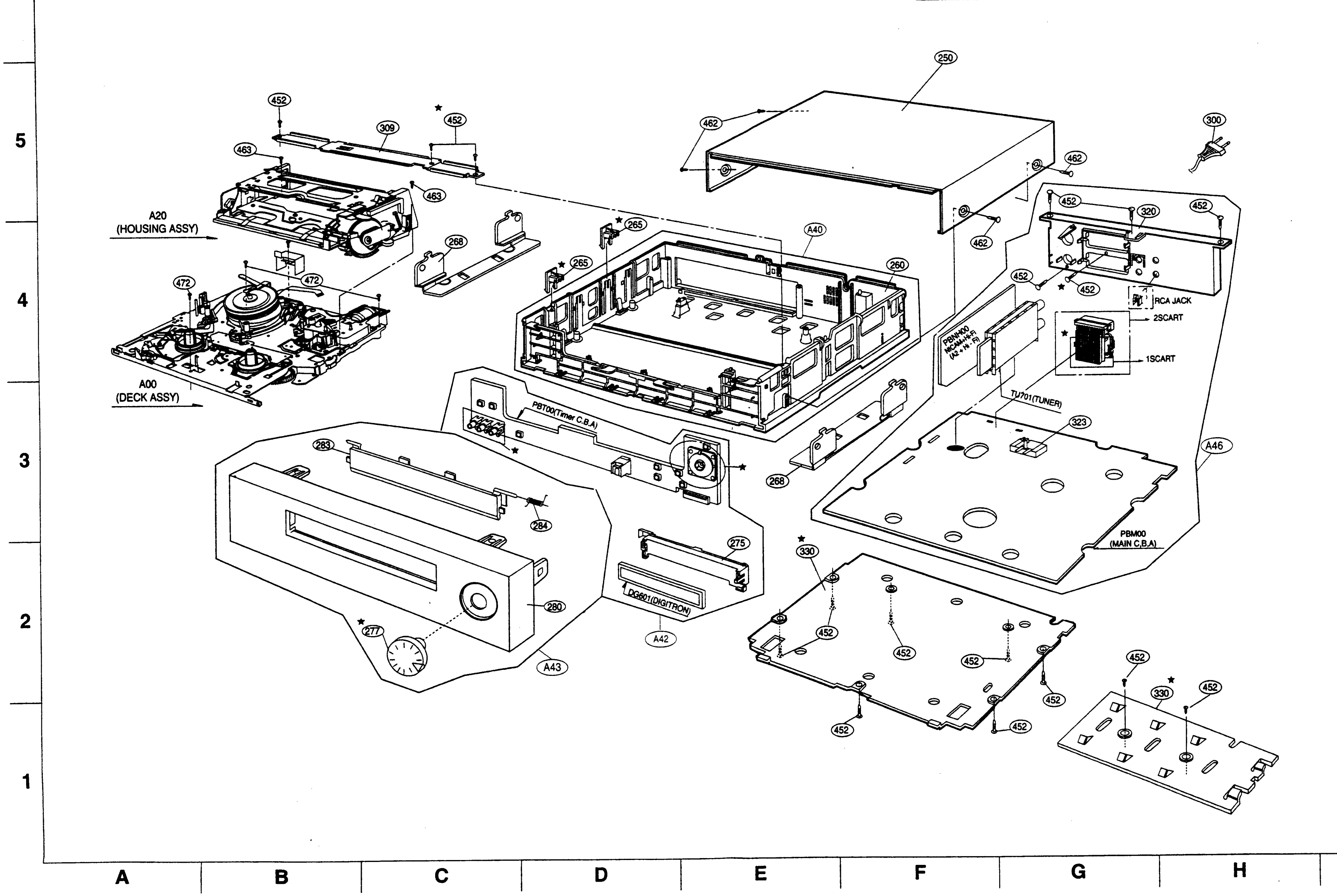
· Cabinet & Main Frame Section **MODEL:N919P**

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
ASSEMBLY PARTS SECTION						
		A40	315-348X	FRAME ASSY	ASSY MAIN(PAL HI-FI)	NSP
		A42	6871R-1076D	PWB(PCB) ASSY	TIMER(N919P 3GL1L)	
		A43	3721R-F081J	PANEL ASSY,FRONT[NORMAL PARTS]	N919P 3GL1L	
		A46	3501R-1075B	BOARD ASSY	MAIN	
PARTS SECTION						
		250	3110R-0054S	CASE	TOP	
		260	315-347Q	FRAME	MAIN	NSP
		265	324-995A	HOLDER	PWB	
		268	255-359A	PLATE	SIDE GND	
		277	4941R-Z009C	KNOB ASSY	SHUTTLE	
		280	3720R-F047X	PANEL	FRONT	NSP
		283	3580R-0028X	DOOR	CST	
		284	442-681A	SPRING	DOOR	
		300	6410RCH002B	POWER CORD	DW5000E(FILTER)CNT DONGWON VDE	
	OR	300	681-051C	CORD	KKP-419J/B-172, KLCE-2F,CNT	
		309	321-714A	BRACKET	HOUSING	
		320	3721R-D012M	PANEL ASSY,DISTRIBUTOR(NORMAL	N909P HIFI-EUROAV1_2	
		323	3111R-0065A	CASE ASSY	P-AMP	
		330	220-050A	COVER	BOTTOM	
SCREW						
		452	353-051A	SCREW	SPECIAL	
		462	353-136A	SCREW	SPECIAL(FBK) (353S353A)	
		463	1MBC0302418	BINDING HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		472	353-051E	SCREW	SPECIAL (3X12)	

EXPLODED VIEWS

1. Cabinet & Mainframe Section

NOTE) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.
★ OPTIONAL PARTS



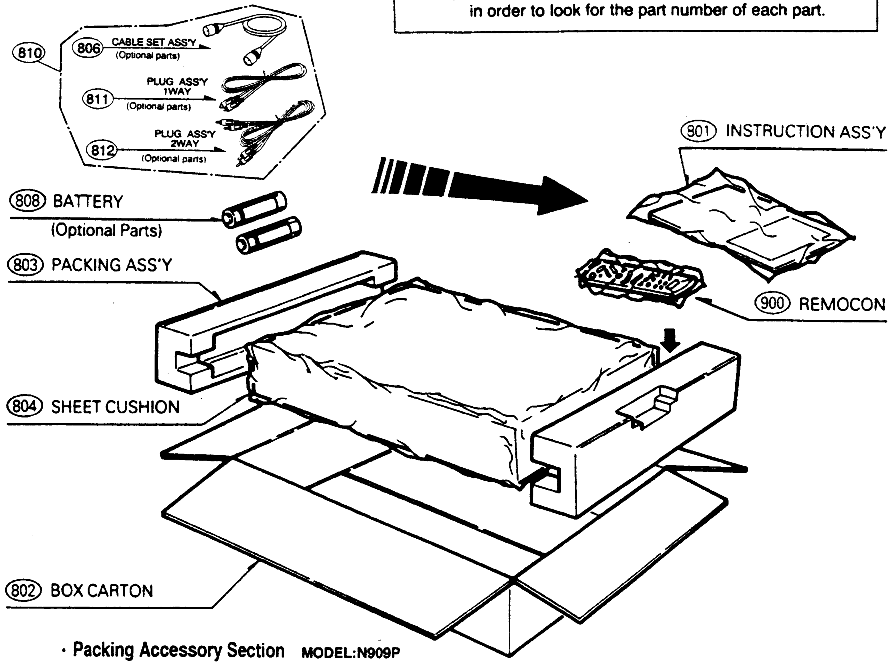
250
462
300
462
452
320
452
462
452
452
RCA JACK
2SCART
1SCART
PBNH00 NICAM+Hi-Fi (A2+Hi-Fi)
TU701(TUNER)
323
A46
PBM00 (MAIN C.B.A)
452
309
★ 452
463
463
A20 (HOUSING ASSY)
268
472
472
A00 (DECK ASSY)
★ 265
★ 265
A40
260
PBT00(Timer C.B.A)
★
★
268
283
284
280
★ 277
A43
275
DG601(DIGITRON)
A42
★ 330
452
452
452
452
452
452
452
★ 330
452
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I

LOCATION GUIDE

A00	A3
A20	A4
A40	E4
A42	D2
A43	C1
A46	H3
PBNH00	F3
PBT00	D1
PBM00	G2
DG601	D2
TU701	G3
250	F5
260	F4
265	D4
266	C5
268	C4
275	E2
277	C2
280	C2
283	B3
284	D2
300	H5
320	H4
323	G2
330	G2

2. Packing & Accessory Section

NOTE) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.


810
806 CABLE SET ASS'Y (Optional parts)
PLUG ASS'Y 1WAY
811 (Optional parts)
PLUG ASS'Y 2WAY
812 (Optional parts)
808 BATTERY (Optional Parts)
803 PACKING ASS'Y
801 INSTRUCTION ASS'Y
900 REMOCON
804 SHEET CUSHION
802 BOX CARTON

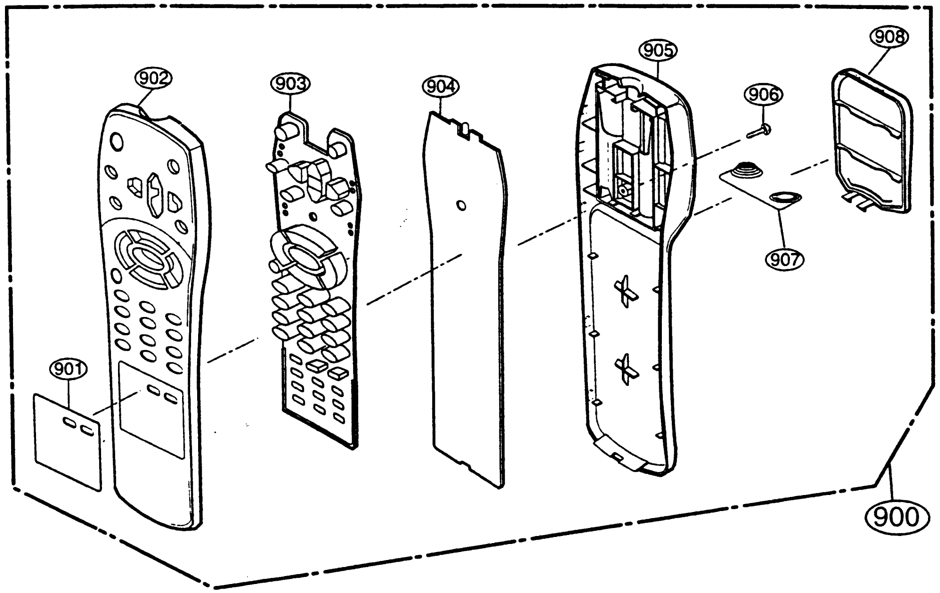
· Packing Accessory Section MODEL:N909P

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		801	3835RP0026R	INSTRUCTION ASSY	N909P 3GL1L	
		802	3890R-H102A	BOX	N909P 3GL1L SW3-A 0.921 2 FLX	
		803	3920R-0046A	PACKING	E,PS	
	OR	804	292-053A	BAG	SOFT(VCP)	NSP
		804	3858R-0006A	SHEET	ROLL(W630XL300MX0.5T)	NSP
		806	861-033B	CABLE SET ASSY	RF-CABLE ASSY FTZ (D.D)	
		808	534-002C	BATTERY	1.5V AAM UM-3 LOL 1PAIR	
		810	861-520B	CABLE ASSY	SHORT TERMINAL	
		811	564-017L	PLUG ASSY	PHONE CORD 1WAY (YL)	
		812	564-018M	PLUG ASSY	P/CORD 2WAY(RD/WH)	

· Packing Accessory Section MODEL:N919P

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		801	3835RP0026R	INSTRUCTION ASSY	N909P 3GL1L	
		802	3890R-H123A	BOX	N919P 3GL1L SW3-A 0.921 2 FLX	
		803	3920R-0048A	PACKING	E,PS	
	OR	804	292-053A	BAG	SOFT(VCP)	NSP
		804	3858R-0006A	SHEET	ROLL(W630XL300MX0.5T)	NSP
		806	861-033B	CABLE SET ASSY	RF-CABLE ASSY FTZ (D.D)	
		808	534-002C	BATTERY	1.5V AAM UM-3 LOL 1PAIR	
		810	861-520B	CABLE ASSY	SHORT TERMINAL	
		811	564-017L	PLUG ASSY	PHONE CORD 1WAY (YL)	
		812	564-018M	PLUG ASSY	P/CORD 2WAY(RD/WH)	

3. Remote Control Section


902
903
904
905
906
907
908
901
900

· Remote Control Section MODEL:N909P

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		900	6711R1P013W	REMOTE CONTROLLER ASSY	N1(N909P)	

· Remote Control Section MODEL:N919P

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		900	6711R1P013W	REMOTE CONTROLLER ASSY	N1	

SECTION3 ELECTRICAL

ELECTRICAL ADJUSTMENT PROCEDURES

Electronic Test Equipment

- Oscilloscope
- + Driver
- PAL Test Tape (SP)
- Power Supply

ABBREVIATIONS

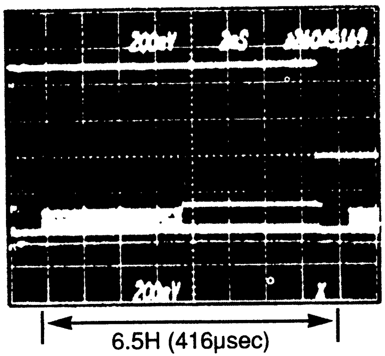
- SPEC: SPECIFICATION
- M.P: MEASUREMENT POINT
- A.P: Adjustment Point

1. Servo Circuit

1) PG Adjustment

WAVEFORM

Composite Video Signal



- MODE : Playback
- SPEC : 6.5H ±0.5H
  (416μsec, 1H=64μsec)
- M.P : W804, 805 (H.SW)
  W903(Video Out)
- A.P : VR501

Fig. 3-1

Purpose:

For the phase dividing of the Video A,B heads with 180° and the exact tracking of each track to meet head switching point with VHS Spec.

Procedure:

a. Playback a PAL SP test tape.
   (At this time, the "ART" is lighting, after pressing the(∧) or (∨) and adjust the X-Value).
b. Connect CH-1 terminal of oscilloscope to W804, 805 (H.SW) and CH-2 terminal to Video Out terminal (W903)of VCR.
c. Trigger the complex Video signal of CH2 to CH-1 (H.SW), and adjust VR501 so that the distance from A(B) head selection point of H.SW signal to the starting point of Vertical synchronized signal is 6.5H (416u sec, 1H=64μ sec).

Reference:

1. ±PG adjustment is practiced in the state of maximum RF level and locked servo system (MTR Mode).
2. The deviation between A/B Head Adjustment location should be within ±0.5H (32μ sec).
3. The deviation between the specification of adjustment and the practical measurement value should be within ±0.5H (32u sec).
4. Oscilloscope and VCR set should be connected with GND.

2. Tuner/IF Circuit (p`s only)

1) Stereo Seperation Adjustment

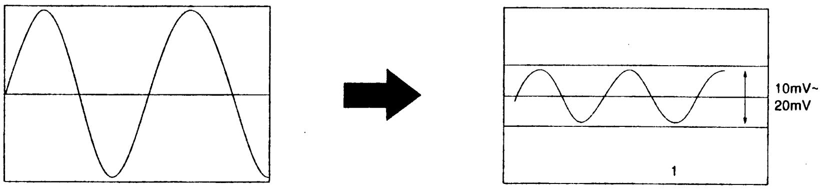
- MODE : -Control signal (CH09)
  -Pattern Generator (CH11)
- SPEC : 10mVp-p~20mVp-p
- M.P : SCART AUDIO OUT L
- A.P : VR701

Procedure:

a. Receive stereo Mode with Control signal, CH09(203.25MHz) or 11ch(217.25MHz)of Pattern Generator at RF 70dBuV.

b. L-CH of stereo signal off adjust VR701 to be met with above specification.

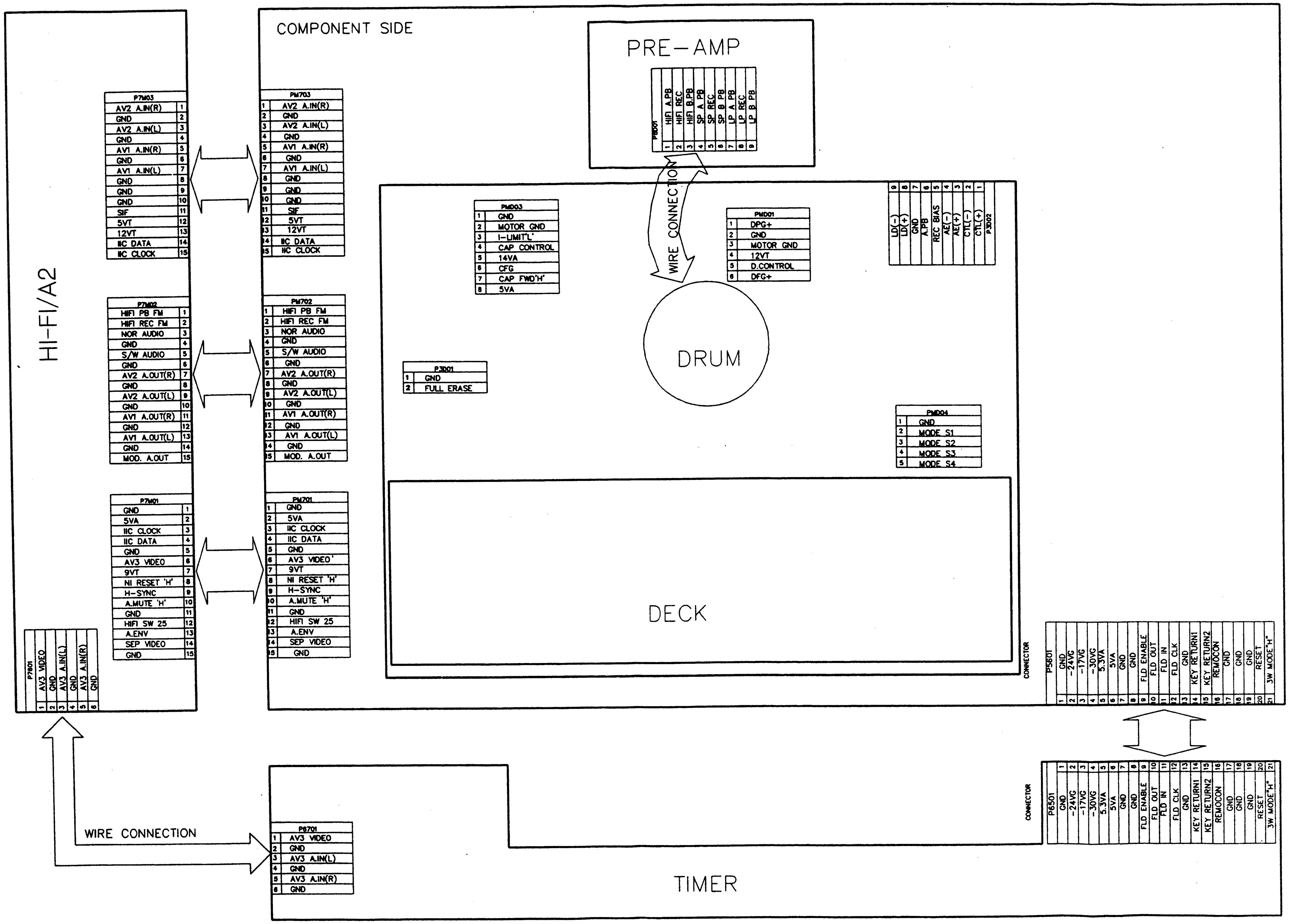
Waveform



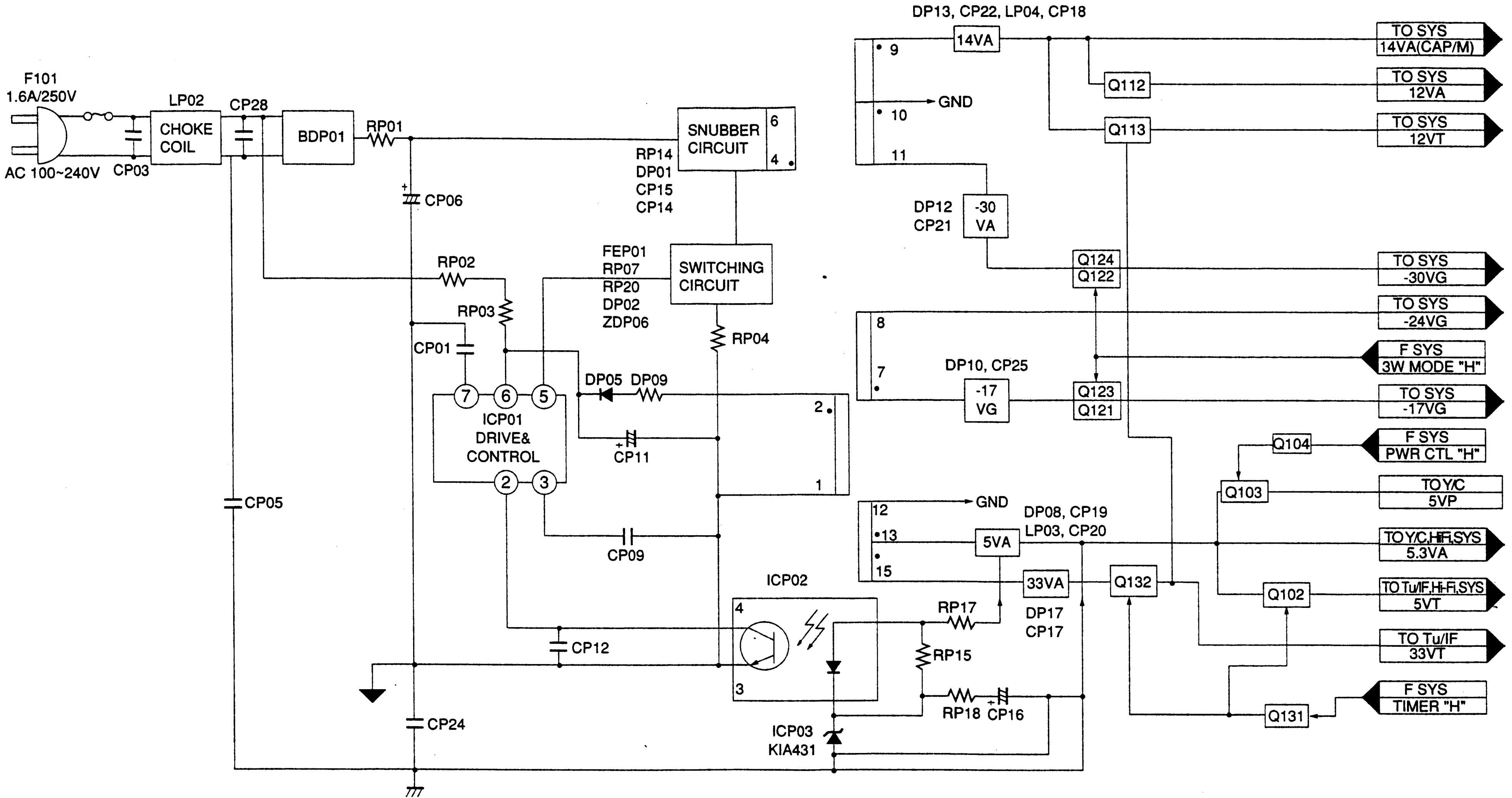
Before Adjustment Fig.3-2 After Adjustment

BLOCK & CIRCUIT DIAGRAMS

1. Overall Wiring Diagram


HI-FI/A2
COMPONENT SIDE
PRE-AMP
PB001
HIFI A.PB
HIFI REC
HIFI B.PB
SP A PB
SP REC
SP B PB
LP A PB
LP REC
LP B PB
WIRE CONNECTION
DRUM
DECK
TIMER
P7M03
AV2 A.IN(R)
GND
AV2 A.IN(L)
GND
AV1 A.IN(R)
GND
AV1 A.IN(L)
GND
GND
GND
SIF
5VT
12VT
IIC DATA
IIC CLOCK
PM703
P7M02
HIFI PB FM
HIFI REC FM
NOR AUDIO
GND
S/W AUDIO
GND
AV2 A.OUT(R)
GND
AV2 A.OUT(L)
GND
AV1 A.OUT(R)
GND
AV1 A.OUT(L)
GND
MOD. A.OUT
PM702
P7M01
GND
5VA
IIC CLOCK
IIC DATA
GND
AV3 VIDEO
9VT
NI RESET 'H'
H-SYNC
A.MUTE 'H'
GND
HIFI SW 25
A.ENV
SEP VIDEO
GND
PM701
P7601
AV3 VIDEO
GND
AV3 A.IN(L)
GND
AV3 A.IN(R)
GND
PMD03
GND
MOTOR GND
I-LIMIT'L'
CAP CONTROL
14VA
CFG
CAP FWD'H'
5VA
PMD01
DPG+
GND
MOTOR GND
12VT
D.CONTROL
DFG+
P3002
CTL(+)
CTL(-)
AE(+)
AE(-)
REC BIAS
A.PB
GND
LD(+)
LD(-)
P3001
GND
FULL ERASE
PMD04
GND
MODE S1
MODE S2
MODE S3
MODE S4
CONNECTOR
P5601
GND
-24VG
-17VG
-30VG
5.3VA
5VA
GND
GND
FLD ENABLE
FLD OUT
FLD IN
FLD CLK
GND
KEY RETURN1
KEY RETURN2
REMOCON
GND
GND
GND
RESET
3W MODE"H"
P6501
P8701
AV3 VIDEO
GND
AV3 A.IN(L)
GND
AV3 A.IN(R)
GND

2. Power (SMPS) Block Diagram


F101
1.6A/250V
AC 100~240V
CP03
LP02
CHOKE COIL
CP28
BDP01
RP01
CP06
SNUBBER CIRCUIT
6
4
RP14
DP01
CP15
CP14
FEP01
RP07
RP20
DP02
ZDP06
SWITCHING CIRCUIT
RP04
RP02
RP03
CP01
7
6
5
ICP01
DRIVE&
CONTROL
2
3
DP05 DP09
CP11
CP09
CP05
CP12
CP24
ICP02
4
3
ICP03
KIA431
RP17
RP15
RP18 CP16
DP13, CP22, LP04, CP18
9
14VA
10
GND
11
DP12
CP21
-30
VA
Q112
Q113
Q124
Q122
8
7
DP10, CP25
-17
VG
Q123
Q121
2
1
12
GND
13
15
5VA
DP08, CP19
LP03, CP20
33VA
DP17
CP17
Q132
Q104
Q103
Q102
Q131
TO SYS
14VA(CAP/M)
TO SYS
12VA
TO SYS
12VT
TO SYS
-30VG
TO SYS
-24VG
F SYS
3W MODE "H"
TO SYS
-17VG
F SYS
PWR CTL "H"
TO Y/C
5VP
TO Y/C,HIFI,SYS
5.3VA
TO Tu/IF,Hi-Fi,SYS
5VT
TO Tu/IF
33VT
F SYS
TIMER "H"

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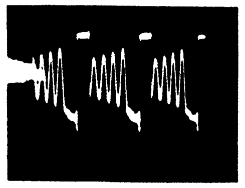
★ Power TR Voltage Sheet

Port / TR NO.	Emitter		Collector		Base	
	PB	REC	PB	REC	PB	REC
Q102	5.4	5.4	5.2	5.2	4.6	4.6
Q103	5.4	5.4	5.3	5.3	4.6	4.6
Q104	0.0	0.0	0.0	0.0	0.7	0.7
Q112	12.9	12.9	14.9	15.1	13.5	13.5
Q113	12.5	12.6	14.9	15.2	13.6	13.7
Q121	5.4	5.4	5.3	5.3	0.0	0.0
Q122	5.4	5.4	5.3	5.3	0.0	0.0
Q123	-15.6	-15.7	-15.6	-15.8	-14.9	-15.1
Q124	-28.4	-28.8	-28.4	-28.8	-27.7	-28.0
Q131	0.0	0.0	0.0	0.0	0.7	0.7
Q132	35.2	35.6	35.0	35.5	34.5	35.0

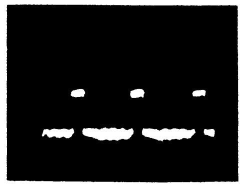
★ Power Oscilloscope Waveform

①



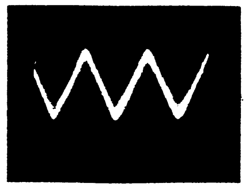
ICP01 Pin⑦
50v/div, 10us/div

②



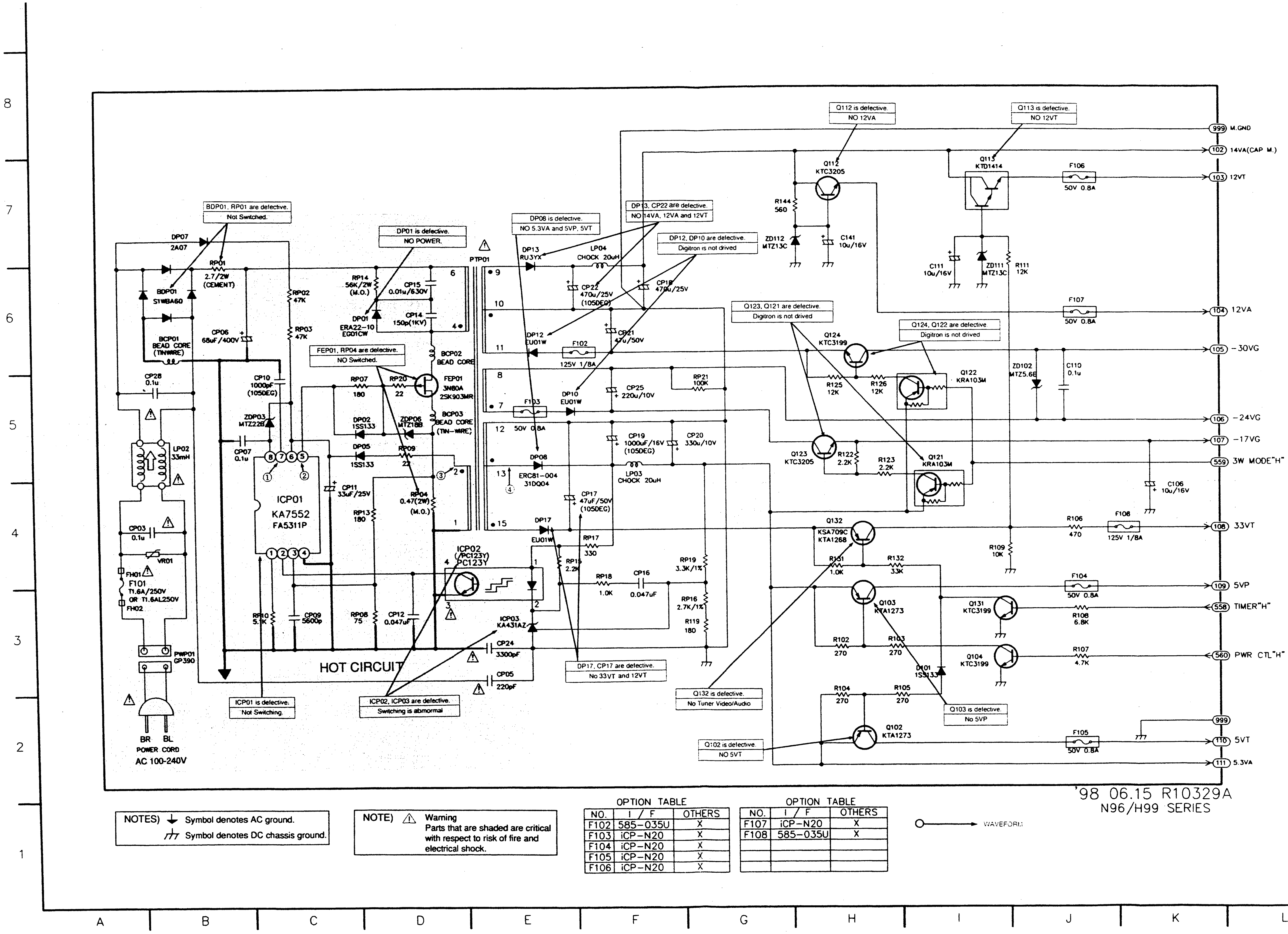
ICP01 Pin⑤
0.5V/div, 5us/div

③④



0.5V/div.5us/div

2. Power (SMPS) Circuit Diagram


BDP01, RP01 are defective.
Not Switched.
DP01 is defective.
NO POWER.
DP08 is defective.
NO 5.3VA and 5VP, 5VT
DP13, CP22 are defective.
NO 14VA, 12VA and 12VT
DP12, DP10 are defective.
Digitron is not drived
Q112 is defective.
NO 12VA
Q113 is defective.
NO 12VT
Q123, Q121 are defective.
Digitron is not drived
Q124, Q122 are defective
Digitron is not drived
FEP01, RP04 are defective.
NO Switched.
ICP01 is defective.
Not Switching.
ICP02, ICP03 are defective.
Switching is abnormal
DP17, CP17 are defective.
No 33VT and 12VT
Q132 is defective.
No Tuner Video/Audio
Q103 is defective.
No 5VP
Q102 is defective
NO 5VT
HOT CIRCUIT
ICP01
KA7552
FA5311P
ICP02
(PC123Y)
PC123Y
ICP03
KA431AZ
PTP01
FEP01
3N80A
2SK903MR
BCP01
BEAD CORE
(TINWIRE)
BCP02
BEAD CORE
BCP03
BEAD CORE
(TIN-WIRE)
BDP01
S1WBA60
RP01
2.7/2W
(CEMENT)
DP07
2A07
CP06
68uF/400V
CP28
0.1u
LP02
33mH
CP03
0.1u
VR01
FH01
F101
T1.6A/250V
OR T1.6AL250V
FH02
PWP01
GP390
BR
BL
POWER CORD
AC 100-240V
DP13
RU3YX
LP04
CHOCK 20uH
CP22
470u/25V
(105DEG)
CP18
470u/25V
DP12
EU01W
F102
125V 1/8A
CP21
47u/50V
DP10
EU01W
F103
50V 0.8A
CP25
220u/10V
RP21
100K
CP19
1000uF/16V
(105DEG)
CP20
330u/10V
DP08
ERC81-004
31DQ04
LP03
CHOCK 20uH
CP17
47uF/50V
(105DEG)
DP17
EU01W
RP17
330
RP18
1.0K
CP16
0.047uF
RP19
3.3K/1%
RP16
2.7K/1%
RP119
180
CP24
3300pF
CP05
220pF
Q112
KTC3205
R144
560
ZD112
MTZ13C
C141
10u/16V
Q113
KTD1414
C111
10u/16V
ZD111
MTZ13C
R111
12K
F106
50V 0.8A
F107
50V 0.8A
Q124
KTC3199
R125
12K
R126
12K
Q122
KRA103M
ZD102
MTZ5.6B
C110
0.1u
Q123
KTC3205
R122
2.2K
R123
2.2K
Q121
KRA103M
C106
10u/16V
R106
470
F108
125V 1/8A
Q132
KSA709C
KTA1268
R131
1.0K
R132
33K
R109
10K
F104
50V 0.8A
Q103
KTA1273
Q131
KTC3199
R108
6.8K
R102
270
R103
270
D101
1SS133
Q104
KTC3199
R107
4.7K
R104
270
R105
270
Q102
KTA1273
F105
50V 0.8A
999 M.GND
102 14VA(CAP M.)
103 12VT
104 12VA
105 -30VG
106 -24VG
107 -17VG
559 3W MODE"H"
108 33VT
109 5VP
558 TIMER"H"
560 PWR CTL"H"
999
110 5VT
111 5.3VA
A
B
C
D
E
F
G
H
I
J
K
L
M
1
2
3
4
5
6
7
8

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N96/H99 SERIES

LOCATION GUIDE

BCP01	B6	Q132	H4
BCP02	D6	R102	H3
BCP03	D5	R103	H3
BDP01	B6	R104	H2
C106	K4	R105	H2
C110	J5	R106	J4
C111	I6	R107	J3
C141	H7	R108	J3
CP03	A4	R109	I4
CP05	E3	R111	J6
CP06	B6	R119	G3
CP07	B5	R122	H5
CP09	C3	R123	H5
CP10	C5	R125	H5
CP11	C4	R126	H5
CP12	D3	R131	H4
CP14	D6	R132	H4
CP15	D6	R144	G7
CP16	F4	RP01	B6
CP17	F4	RP02	C6
CP18	F6	RP03	C6
CP19	F5	RP04	D4
CP20	G5	RP07	C5
CP21	F6	RP08	C3
CP22	F6	RP09	D5
CP24	E3	RP10	C3
CP25	F5	RP13	C4
CP28	B5	RP14	C6
D101	I3	RP15	E4
DP01	C6	RP16	F3
DP02	C5	RP17	F4
DP05	C5	RP18	F4
DP07	B7	RP19	F4
DP08	E5	RP20	D5
DP10	E5	RP21	G5
DP12	E6	VR01	B4
DP13	E7	ZD102	J5
DP17	E4	ZD111	I6
F102	E6	ZD112	G7
F103	E5	ZDP03	B5
F104	J4	ZDP06	D5
F105	J2		
F106	J7		
F107	J6		
F108	J4		
FEP01	D5		
FH01	A4		
FH02	A3		
ICP01	C4		
ICP02	D4		
ICP03	E3		
LP02	B5		
LP03	F4		
LP04	F7		
PTP01	E6		
PWP01	B3		
Q102	H2		
Q103	H3		
Q104	I3		
Q112	H7		
Q113	I7		
Q121	I5		
Q122	I5		
Q123	H5		
Q124	H6		
Q131	I3		

NOTES) ⏚ Symbol denotes AC ground.
⏊ Symbol denotes DC chassis ground.

NOTE) ⚠ Warning
Parts that are shaded are critical with respect to risk of fire and electrical shock.

OPTION TABLE

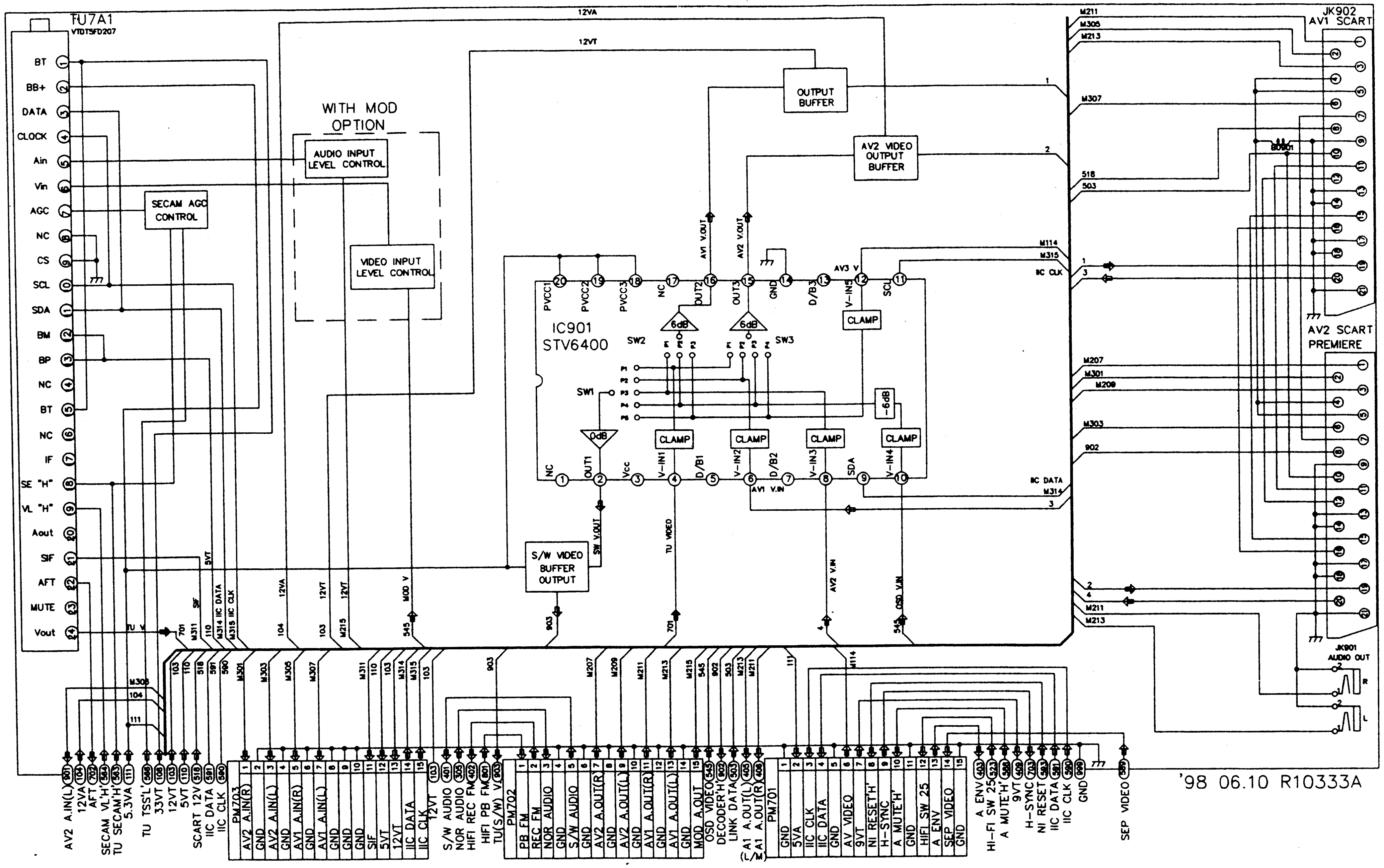
NO.	I / F	OTHERS
F102	585-035U	X
F103	iCP-N20	X
F104	iCP-N20	X
F105	iCP-N20	X
F106	iCP-N20	X

OPTION TABLE

NO.	I / F	OTHERS
F107	iCP-N20	X
F108	585-035U	X

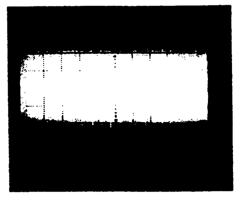
○——→ WAVEFORM

3. Tuner/IF, SCART Block Diagram


TU7A1
VTDT5FD207
BT
BB+
DATA
CLOCK
Ain
Vin
AGC
NC
CS
SCL
SDA
BM
BP
NC
BT
NC
IF
SE "H"
VL "H"
Aout
SIF
AFT
MUTE
Vout
12VA
12VT
WITH MOD OPTION
AUDIO INPUT LEVEL CONTROL
SECAM AGC CONTROL
VIDEO INPUT LEVEL CONTROL
OUTPUT BUFFER
AV2 VIDEO OUTPUT BUFFER
AV1 V.OUT
AV2 V.OUT
IC901
STV6400
PVCC1
PVCC2
PVCC3
OUT2
OUT3
GND
D/B3
V-IN5
SCL
6dB
SW2
SW3
SW1
0dB
CLAMP
-6dB
OUT1
Vcc
V-IN1
D/B1
V-IN2
D/B2
V-IN3
SDA
V-IN4
AV1 V.IN
AV3 V
IIC CLK
IIC DATA
S/W VIDEO BUFFER OUTPUT
SW V.OUT
TU VIDEO
AV2 V.IN
OSD V.IN
MOD V
JK902
AV1 SCART
AV2 SCART
PREMIERE
JK901
AUDIO OUT
R
L
AV2 A.IN(L)
12VA
AFT
SECAM VL'H'
TU SECAM'H'
5.3VA
TU
TSS'L'
33VT
12VT
5VT
SCART 12V
IIC DATA
IIC CLK
PM703
AV2 A.IN(R)
GND
AV2 A.IN(L)
GND
AV1 A.IN(R)
GND
AV1 A.IN(L)
GND
GND
GND
SIF
5VT
12VT
IIC DATA
IIC CLK
12VT
S/W AUDIO
NOR AUDIO
HIFI REC FM
HIFI PB FM
TU(S/W) V
PM702
PB FM
REC FM
NOR AUDIO
GND
S/W AUDIO
GND
AV2 A.OUT(R)
GND
AV2 A.OUT(L)
GND
AV1 A.OUT(R)
GND
AV1 A.OUT(L)
GND
MOD A.OUT
OSD VIDEO
DECODER'H'
LINK DATA
A1 A.OUT(L)
A1 A.OUT(R)
(L/M)
PM701
GND
5VA
IIC CLK
IIC DATA
GND
AV VIDEO
9VT
NI RESET'H'
H-SYNC
A MUTE'H'
GND
HIFI SW 25
A ENV
SEP VIDEO
GND
A ENV
HI-FI SW 25
A MUTE'H'
9VT
H-SYNC
NI RESET
IIC DATA
IIC CLK
GND
SEP VIDEO
'98 06.10 R10333A

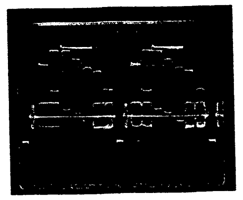
★ TU/IF Oscilloscope Waveform

①



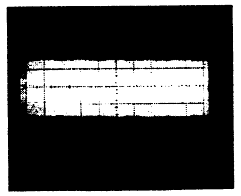
TU7A1⑰ Pin
(IF Signal)

②



TU7A1㉔ Pin
(Video Signal)

③



TU7A1㉑ Pin
&IC701 ㊼Pin
(SIF Signal)

★ TU/IF, SCART IC Voltage Sheet

TUNER(TU7A1)

1				5					10					15					20				
32.67	5.05	5.01	5.01	0.07	0.07	2.92	0	0	5.02	5.02	5.07	5.07	0	32.67	0	0.12	4.9	0	2.47	0.09	2.93	0	2.83
BT	BBT	data	clock	A.IN	V.in	AGC	NC	CS	SCL	SDA	BM	BP	NC	BT	NC	IF	SE"H"	VL"H"	A.out	SIF	AFT	NC	V.out

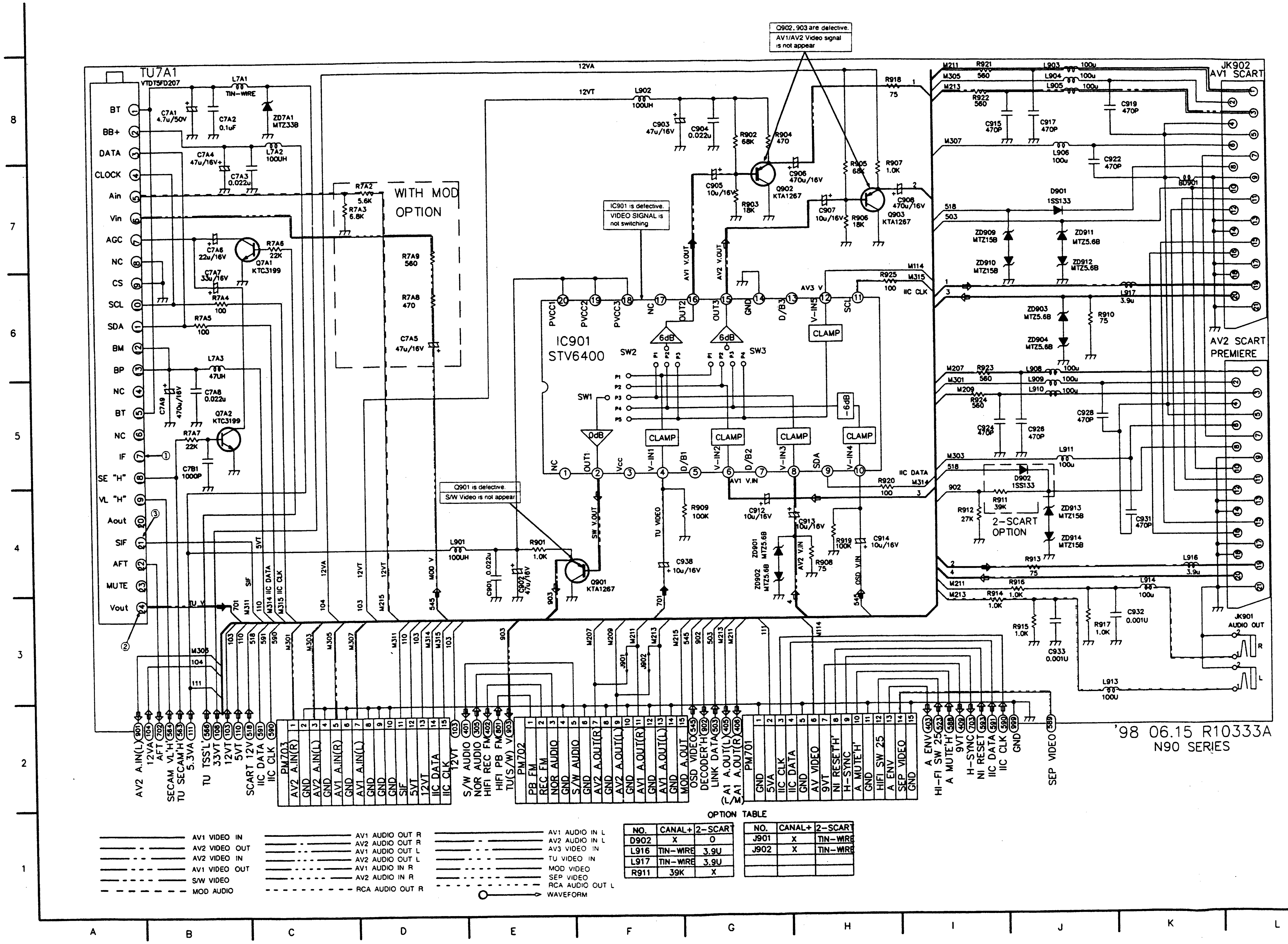
PB(REC)

IC901
(STV6400)

20					15				
0.3(0.0)	1.1(1.1)	4.3(4.2)	1.7(1.7)	4.2(4.2)	1.4(1.4)	0.0(0.0)	1.4(1.4)	pulse(pulse)	1.9(2.1)

1				5					10
5.1(5.1)	5.1(5.1)	5.1(5.1)	0.0(0.0)	1.4(1.6)	1.4(1.4)	0.0(0.0)	0.0(0.0)	1.4(1.4)	pulse(pulse)

3. Tuner/IF, SCART Circuit Diagram


TU7A1
VTDT5FD207
BT
BB+
DATA
CLOCK
Ain
Vin
AGC
NC
CS
SCL
SDA
BM
BP
NC
BT
NC
IF
SE "H"
VL "H"
Aout
SIF
AFT
MUTE
Vout
WITH MOD OPTION
IC901
STV6400
2-SCART OPTION
JK902
AV1 SCART
AV2 SCART
PREMIERE
JK901
AUDIO OUT
PM703
PM702
PM701
AV1 VIDEO IN
AV2 VIDEO OUT
AV2 VIDEO IN
AV1 VIDEO OUT
S/W VIDEO
MOD AUDIO
AV1 AUDIO OUT R
AV2 AUDIO OUT R
AV1 AUDIO OUT L
AV2 AUDIO OUT L
AV1 AUDIO IN R
AV2 AUDIO IN R
RCA AUDIO OUT R
AV1 AUDIO IN L
AV2 AUDIO IN L
AV3 VIDEO IN
TU VIDEO IN
MOD VIDEO
SEP VIDEO
RCA AUDIO OUT L
WAVEFORM

Q902, 903 are defective. AV1/AV2 Video signal is not appear

IC901 is defective. VIDEO SIGNAL is not switching

Q901 is defective. S/W Video is not appear

'98 06.15 R10333A
N90 SERIES

OPTION TABLE

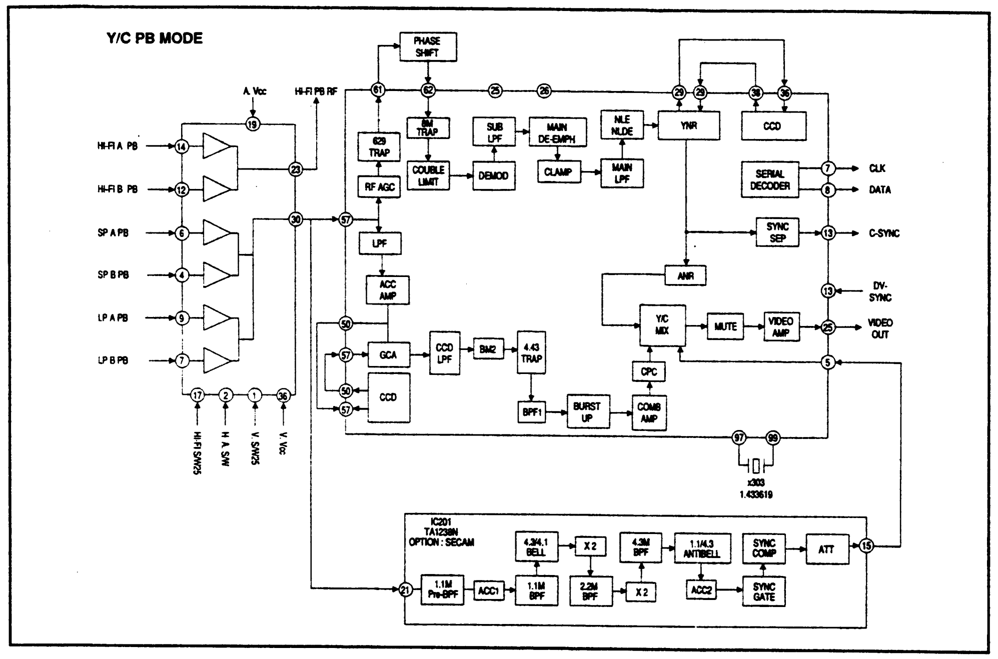
NO.	CANAL+	2-SCART
D902	X	O
L916	TIN-WIRE	3.9U
L917	TIN-WIRE	3.9U
R911	39K	X

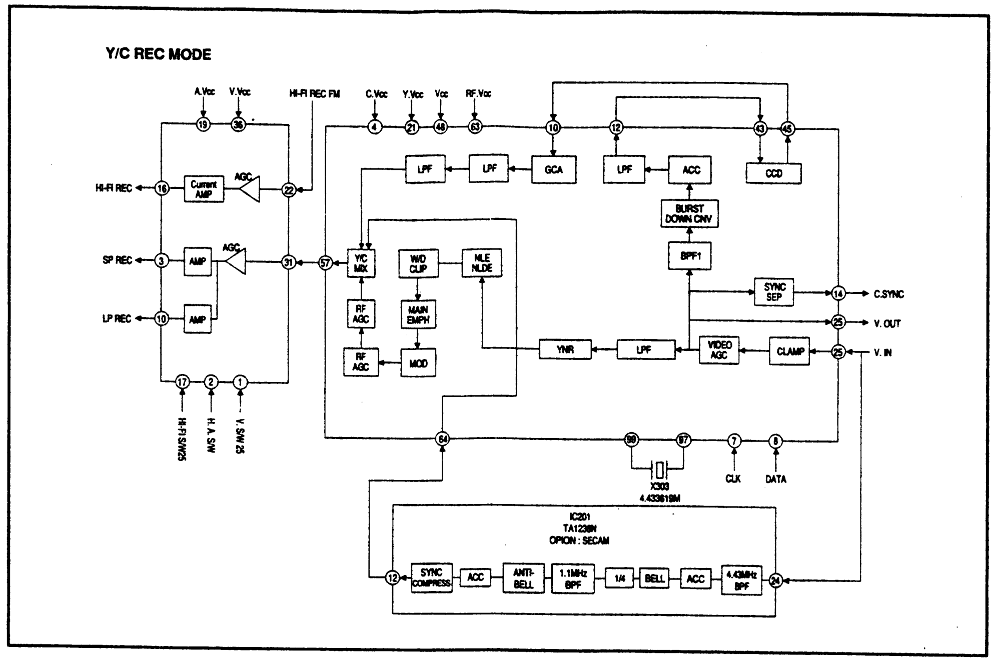
NO.	CANAL+	2-SCART
J901	X	TIN-WIRE
J902	X	TIN-WIRE

LOCATION GUIDE

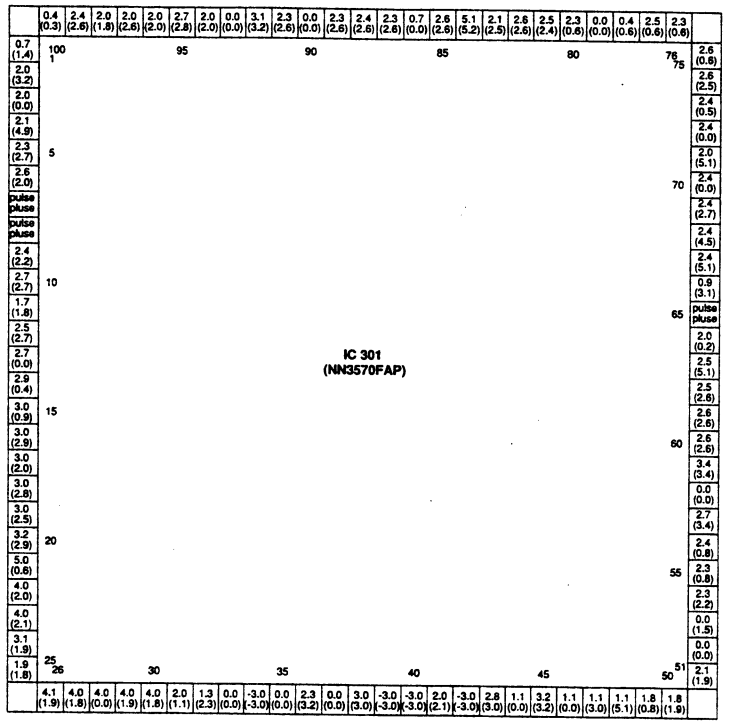
C7A1	B8	M211	F3	R920	H4
C7A2	B8	M211	G3	R921	I8
C7A3	B7	M211	I4	R922	I8
C7A4	B8	M211	I8	R923	I6
C7A5	D6	M213	F3	R924	I5
C7A6	B7	M213	G3	R925	H6
C7A7	B6	M213	I3	TU7A1	B8
C7A8	B5	M213	I8	ZD7A1	C8
C7A9	B5	M215	D3	ZD901	G4
C7B1	B5	M215	F3	ZD902	G4
C901	E3	M301	C3	ZD903	J6
C902	E4	M301	I5	ZD904	J6
C903	F8	M303	C3	ZD909	I7
C904	G8	M303	B3	ZD910	I6
C905	G7	M303	I5	ZD911	J7
C906	H7	M305	C3	ZD912	J7
C907	H7	M305	I8	ZD913	J4
C908	I7	M307	C3	ZD914	J4
C912	G4	M307	I8		
C913	H4	M311	D3		
C914	H4	M311	C3		
C915	I8	M314	D3		
C917	J8	M314	C3		
C919	K8	M314	I4		
C922	J7	M315	D3		
C924	I5	M315	C3		
C926	J5	M315	I6		
C928	J5	PM701	G2		
C931	K4	PM702	E2		
C932	K3	PM703	C2		
C933	J3	Q7A1	C7		
C938	F4	Q7A2	B5		
D901	J7	Q901	F4		
D902	J5	Q902	G7		
IC901	E6	Q903	H7		
J901	F3	R7A2	D7		
J902	F3	R7A3	C7		
JK901	L3	R7A4	B6		
JK902	L8	R7A5	B6		
L7A1	B8	R7A6	C7		
L7A2	C8	R7A7	B5		
L7A3	B6	R7A8	D6		
L901	D4	R7A9	D7		
L902	F8	R901	E4		
L903	J8	R902	G8		
L904	J8	R903	G7		
L905	J8	R904	G8		
L906	J8	R905	H7		
L908	J6	R906	H7		
L909	J5	R907	H7		
L910	J5	R908	H4		
L911	J5	R909	G4		
L913	J3	R910	J6		
L914	K4	R911	I4		
L916	K4	R912	I4		
L917	K6	R913	J4		
M114	H3	R914	I3		
M114	I6	R915	J3		
M207	F3	R916	J4		
M207	I6	R917	J3		
M209	F3	R918	H8		
M209	I5	R919	H4		

4. Y/C Block Diagram


Y/C PB MODE
PHASE SHIFT
A. Vcc
HI-FI PB RF
HI-FI A PB
HI-FI B PB
SP A PB
SP B PB
LP A PB
LP B PB
HI-FI SW25
H. A. SW
V. SW25
V. Vcc
629 TRAP
BM TRAP
COUBLE LIMIT
RF AGC
SUB LPF
DEMOD
MAIN DE-EMPH
CLAMP
NLE NLDE
MAIN LPF
YNR
CCD
SERIAL DECODER
CLK
DATA
SYNC SEP
C-SYNC
DV-SYNC
ANR
Y/C MIX
MUTE
VIDEO AMP
VIDEO OUT
LPF
ACC AMP
GCA
CCD LPF
BM2
4.43 TRAP
BPF1
BURST UP
COMB AMP
CPC
x303
1.433619
IC201
TA1238N
OPTION : SECAM
4.3/4.1 BELL
X 2
4.3M BPF
1.1/4.3 ANTIBELL
SYNC COMP
ATT
1.1M Pre-BPF
ACC1
1.1M BPF
2.2M BPF
ACC2
SYNC GATE

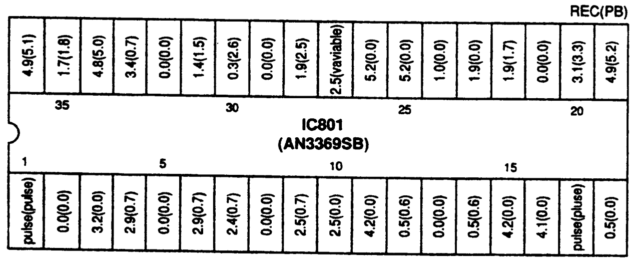

Y/C REC MODE
A.Vcc
V.Vcc
HI-FI REC FM
C.Vcc
Y.Vcc
Vcc
RF.Vcc
HI-FI REC
Current AMP
AGC
SP REC
AMP
LP REC
HI-FI S/W25
H. A. S/W
V. S/W 25
LPF
GCA
ACC
CCD
BURST DOWN CNV
BPF1
Y/C MIX
W/D CLIP
NLE NLDE
RF AGC
MAIN EMPH
MOD
SYNC SEP
C.SYNC
V. OUT
V. IN
YNR
VIDEO AGC
CLAMP
X303
4.433619M
CLK
DATA
IC201
TA1238N
OPION : SECAM
SYNC COMPRESS
ANTI-BELL
1.1MHz BPF
1/4
BELL
4.43MHz BPF

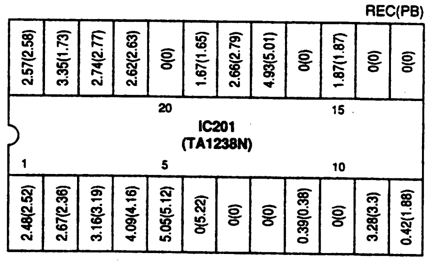
★ A/V IC Voltage Sheet


0.4 (0.3)
2.4 (2.6)
2.0 (1.8)
2.0 (2.6)
2.0 (2.0)
2.7 (2.8)
2.0 (2.0)
0.0 (0.0)
3.1 (3.2)
2.3 (2.6)
0.0 (0.0)
2.3 (2.6)
2.4 (2.6)
2.3 (2.6)
0.7 (0.0)
2.6 (2.6)
5.1 (5.2)
2.1 (2.5)
2.6 (2.6)
2.5 (2.4)
2.3 (0.6)
0.0 (0.0)
0.4 (0.6)
2.5 (0.6)
2.3 (0.6)
100
95
90
85
80
76
75
1
5
10
15
20
25
26
0.7 (1.4)
2.0 (3.2)
2.0 (0.0)
2.1 (4.9)
2.3 (2.7)
2.6 (2.0)
pulse pluse
pulse pluse
2.4 (2.2)
2.7 (2.7)
1.7 (1.8)
2.5 (2.7)
2.7 (0.0)
2.9 (0.4)
3.0 (0.9)
3.0 (2.9)
3.0 (2.0)
3.0 (2.8)
3.0 (2.5)
3.2 (2.9)
5.0 (0.6)
4.0 (2.0)
4.0 (2.1)
3.1 (1.9)
1.9 (1.8)
IC 301
(NN3570FAP)
70
65
60
55
51
50
2.6 (0.6)
2.6 (2.5)
2.4 (0.5)
2.4 (0.0)
2.0 (5.1)
2.4 (0.0)
2.4 (2.7)
2.4 (4.5)
2.4 (5.1)
0.9 (3.1)
pulse pluse
2.0 (0.2)
2.5 (5.1)
2.5 (2.6)
2.6 (2.6)
2.6 (2.6)
3.4 (3.4)
0.0 (0.0)
2.7 (3.4)
2.4 (0.8)
2.3 (0.8)
2.3 (2.2)
0.0 (1.5)
0.0 (0.0)
2.1 (1.9)
30
35
40
45
4.1 (1.9)
4.0 (1.8)
4.0 (0.0)
4.0 (1.9)
4.0 (1.8)
2.0 (1.1)
1.3 (2.3)
0.0 (0.0)
-3.0 (-3.0)
0.0 (0.0)
2.3 (3.2)
0.0 (0.0)
3.0 (3.0)
-3.0 (-3.0)
-3.0 (-3.0)
2.0 (2.1)
-3.0 (-3.0)
2.8 (3.0)
1.1 (0.0)
3.2 (3.2)
1.1 (0.0)
1.1 (3.0)
1.1 (5.1)
1.8 (0.8)
1.8 (1.9)

★ TR Voltage Sheet

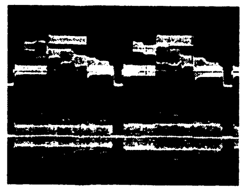
TR NO. \ Port	Emitter		Collector		Base	
	REC	PB	REC	PB	REC	PB
Q301	2.5	2.5	0.0	0.0	1.9	1.8
Q351	0.0	0.0	2.1	5.2	0.8	0.0
Q352	4.6	5.2	-20	5.2	5.1	4.6
Q353	2.1	5.2	4.6	5.2	2.5	5.2
Q354	-16.3	0.0	0.0	0.0	-23.1	0.7
Q355	-16.3	0.0	0.0	0.0	-3.1	0.7
Q801	0.0	0.0	0.0	0.0	5.2	5.2
Q802	0.0	0.0	1.7	1.8	0.0	0.0
Q201	0.0	0.0	2.5	2.5	0.0	0.0


REC(PB)
4.9(5.1)
1.7(1.8)
4.8(5.0)
3.4(0.7)
0.0(0.0)
1.4(1.5)
0.3(2.6)
0.0(0.0)
1.9(2.5)
2.5(vaviable)
5.2(0.0)
5.2(0.0)
1.0(0.0)
1.9(0.0)
1.9(1.7)
0.0(0.0)
3.1(3.3)
4.9(5.2)
35
30
25
20
IC801
(AN3369SB)
1
5
10
15
pulse(pulse)
0.0(0.0)
3.2(0.0)
2.9(0.7)
0.0(0.0)
2.9(0.7)
2.4(0.7)
0.0(0.0)
2.5(0.7)
2.5(0.0)
4.2(0.0)
0.5(0.6)
0.0(0.0)
0.5(0.6)
4.2(0.0)
4.1(0.0)
pulse(pluse)
0.5(0.0)


REC(PB)
2.57(2.58)
3.35(1.73)
2.74(2.77)
2.62(2.63)
0(0)
1.67(1.65)
2.66(2.79)
4.93(5.01)
0(0)
1.87(1.87)
0(0)
0(0)
20
15
IC201
(TA1238N)
1
5
10
2.48(2.52)
2.67(2.36)
3.16(3.19)
4.09(4.16)
5.05(5.12)
0(5.22)
0(0)
0(0)
0.39(0.38)
0(0)
3.28(3.3)
0.42(1.88)

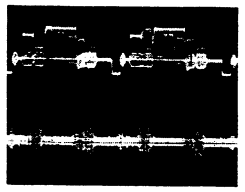
★ AV Oscilloscope Waveform

①



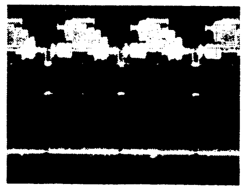
- SECAM PB
  IC201 Pin⑮
  IC301 Pin⑤
  200mV/10μS

②



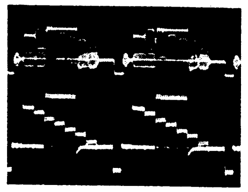
- PAL PB(Low)
  IC301 Pin⑩ ㊺
  200mV/10μS
- PAL PB(High)
  IC301 Pin㉕
  IV/10μS

③



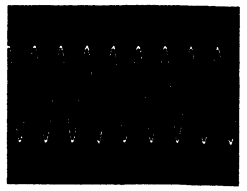
- PAL PB(Low)
  IC301 Pin⑭
  2V/10μS

④



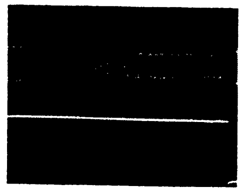
- PAL PB(Low)
  IC301 Pin㉙, ㊴
  200mV/10μS

⑤



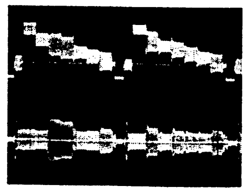
- PAL PB
  IC301 Pin㊶
  100mV/1μS

⑥



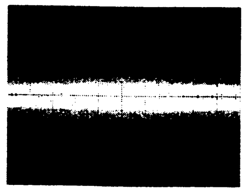
- PAL PB(High)
  IC301 Pin(57)
  IC201 Pin㉑
  100mV/2mS

⑦



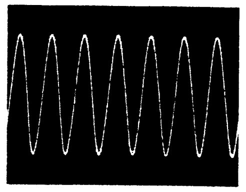
- SECAM REC(Low)
  IC201 Pin⑫
  IC301 Pin(64)
  100mV/10μS

⑧



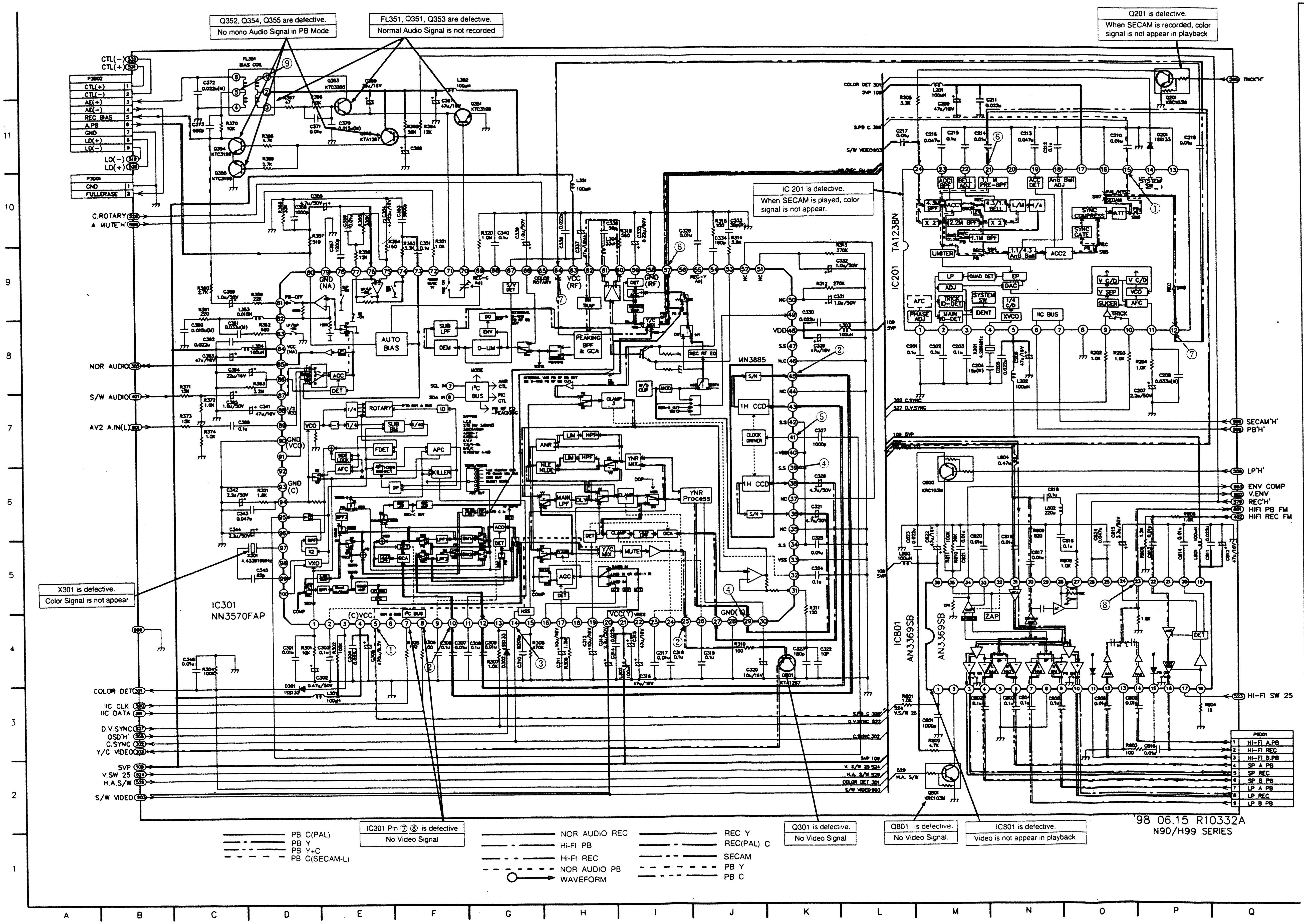
- PAL Hi-Fi PB
  IC801 Pin㉓
  500mV/2μS

⑨



- REC
  FL351 Pin⑤
  10V/10μS

4. A/V Circuit Diagram


CTL(−) 532
CTL(+) 531
P3D02
1 CTL(+)
2 CTL(−)
3 AE(+)
4 AE(−)
5 REC BIAS
6 A.PB
7 GND
8 LD(+)
9 LD(−)
LD(−) 519
LD(+) 520
P3D01
1 GND
2 FULLERASE
C.ROTARY 528
A MUTE'H' 588
NOR AUDIO 305
S/W AUDIO 401
AV2 A.IN(L) 901
999
COLOR DET 301
IIC CLK 590
IIC DATA 591
D.V.SYNC 527
OSD'H' 555
C.SYNC 302
Y/C VIDEO 303
SVP 109
V.SW 25 524
H.A.S/W 529
S/W VIDEO 903
TRICK'H' 565
SECAM'H' 598
PB'H' 599
LP'H' 556
ENV COMP 803
V.ENV 802
REC'H' 579
HIFI PB FM 801
HIFI REC FM 402
HI-FI SW 25 523
P8D01
1 HI-FI A.PB
2 HI-FI REC
3 HI-FI B.PB
4 SP A PB
5 SP REC
6 SP B PB
7 LP A PB
8 LP REC
9 LP B PB
IC301
NN3570FAP
IC201
TA1238N
MN3885
IC801
AN3369SB
AUTO BIAS
YNR Process
Q201 KRC103M
Q301 KTA1267
Q351 KTC3199
Q352 KTA1267
Q353 KTC3205
Q354 KTC3199
Q355 KTC3199
Q801 KRC103M
Q802 KRC103M
FL351 BIAS COIL
X301 4.433619MHz
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O P Q

Q352, Q354, Q355 are defective.
No mono Audio Signal in PB Mode

FL351, Q351, Q353 are defective.
Normal Audio Signal is not recorded

Q201 is defective.
When SECAM is recorded, color signal is not appear in playback

IC 201 is defective.
When SECAM is played, color signal is not appear.

X301 is defective.
Color Signal is not appear

IC301 Pin ⑦,⑧ is defective
No Video Signal

Q301 is defective.
No Video Signal

Q801 is defective.
No Video Signal.

IC801 is defective.
Video is not appear in playback

'98 06.15 R10332A
N90/H99 SERIES

PB C(PAL)
PB Y
PB Y+C
PB C(SECAM-L)

NOR AUDIO REC
Hi-FI PB
Hi-FI REC
NOR AUDIO PB
WAVEFORM

REC Y
REC(PAL) C
SECAM
PB Y
PB C

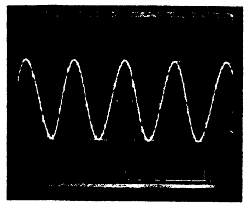
LOCATION GUIDE

109	B2	C351	F9	R370	C11
109	L11	C353	E10	R371	C7
109	L8	C354	E10	R372	C7
109	L7	C355	D10	R373	C7
109	L5	C356	E9	R374	C7
109	K2	C357	E9	R801	L3
301	B3	C358	D10	R802	L3
301	L11	C359	C9	R803	O3
301	K2	C360	C8	R804	P3
302	B3	C361	C8	R805	O5
302	L7	C362	C8	R806	P6
302	K3	C363	C8	R808	N5
303	B3	C364	C8	R809	N5
305	B8	C365	C7	R810	M5
306	L11	C366	C7	R811	M5
306	K3	C367	F11	X201	M8
307	K10	C368	F10	X301	C5
307	L7	C369	E11		
401	B7	C370	E11		
402	P6	C371	D11		
519	B10	C372	C11		
520	B10	C373	C11		
523	P3	C801	L3		
524	B2	C802	M3		
524	L3	C803	M3		
524	K2	C804	M3		
527	B3	C805	N3		
527	L7	C806	N3		
527	L3	C809	O3		
528	B10	C810	O3		
529	B2	C811	P5		
529	K2	C812	P5		
529	L2	C813	O5		
531	B11	C814	P5		
532	B12	C815	O5		
555	B3	C816	N5		
556	P6	C817	N5		
565	P11	C818	N6		
579	P6	C819	M5		
588	B9	C820	M5		
590	B3	C821	M5		
591	B3	C822	L5		
598	P7	C823	L5		
599	P7	C824	N5		
801	P6	D201	O11		
802	P6	D301	D3		
803	P6	D302	G4		
901	B7	FL351	C12		
903	B2	IC201	L9		
903	L10	IC301	C4		
903	K2	IC801	L4		
999	B4	L201	L11		
C201	L8	L202	M7		
C202	L8	L301	D3		
C203	M8	L302	H3		
C204	M8	L303	K8		
C205	M7	L304	H9		
C206	M8	L351	H10		
C207	O7	L352	F11		
C208	O7	L353	C8		
C209	L11	L354	D8		
C210	O11	L801	P5		
C211	M11	L802	N6		
C212	N10	L803	L5		
C213	M11	L804	M6		
C214	M11	P3D01	A10		
C215	M11	P3D02	A11		
C216	L11	P8D01	P3		
C217	L11	Q201	O11		
C218	P11	Q301	J3		
C301	D4	Q351	F11		
C302	D3	Q352	E11		
C303	D4	Q353	E11		
C304	E4	Q354	C10		
C305	E4	Q355	C10		
C306	F4	Q801	L2		
C307	F4	Q802	L6		
C308	F4	R202	N8		
C309	G4	R203	O8		
C310	G4	R204	O8		
C311	G4	R205	L11		
C312	H4	R301	D4		
C313	H4	R302	E4		
C314	H4	R304	C4		
C315	H4	R305	F4		
C316	I3	R306	F4		
C317	I4	R307	G4		
C318	I4	R308	G4		
C319	I4	R309	H4		
C320	J4	R310	J4		
C321	K6	R311	K4		
C322	K4	R312	K9		
C323	J4	R313	K9		
C324	K5	R314	J9		
C325	K5	R315	J9		
C326	K6	R318	H9		
C327	K7	R320	G9		
C328	I9	R321	D6		
C329	K8	R351	F9		
C330	K8	R353	F9		
C331	K8	R354	E9		
C332	K9	R355	E9		
C333	J9	R356	E9		
C334	J9	R357	D9		
C335	I9	R358	D10		
C336	H9	R359	D8		
C337	H9	R360	C9		
C338	H9	R361	C8		
C339	G9	R362	D8		
C340	G9	R363	D7		
C341	D7	R364	F11		
C342	C6	R365	F11		
C343	C6	R366	D11		
C344	C5	R367	D11		
C345	D5	R368	D11		
C346	C4	R369	D10		

5. Hi-Fi, A2 Block Diagram

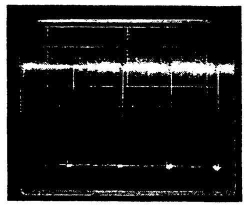
★ Hi-Fi,A2 Oscilloscope Waveform

①



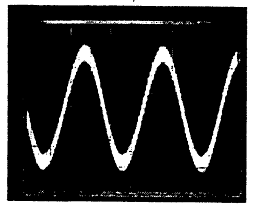
IC702⑬, ⑭pin
(Audio signal)

②



Q703 Collector
(H-SYNC)

③



IC701 pin ⑥, ⑦

★ IC Voltage Sheet

REC(PB)

IC401
(TDA9604)

3.76(3.76)	0(0)	4.92(4.99)	4.98(4.93)	2.63(2.6)	1.83(4.37)	5.23(5.24)	1.88(1.89)	1.43(1.44)	11.89(11.81)	3.81(3.9)	3.79(3.81)	3.81(3.81)	3.82(3.83)	0.77(0.87)	3.8(3.8)	3.78(3.78)	0(0)	0.76(0.77)	3.81(3.83)	3.81(3.81)	3.79(3.81)
				40					35					30					25		
1				5					10					15					20		
0.6(3.76)	0.6(3.76)	0.6(3.79)	0.6(3.79)	0.6(3.76)	0.6(3.76)	0.6(3.76)	0.6(3.76)	0.7(4.43)	0.7(4.43)	0.6(3.82)	0.1(1.03)	3.79(3.76)	3.79(3.76)	4.42(4.42)	4.42(4.42)	4.4(4.4)	0(0)	3.75(3.78)	0(2.66)	0(2.78)	3.81(3.78)

IC701
(U2860B)

1.81	5.09	0	4.35	2.33	2.09	2.07
			10			
1			5			
1.80	0	3.05	3.05	0	2.36	2.35

IC702
(TDA9840)

5.04	3.33	5.12	2.56	0	2.55	2.55	2.56	2.55	2.56
20					15				
1				5					10
4.79	4.03	3.32	2.56	2.55	2.55	2.54	2.54	2.54	2.54

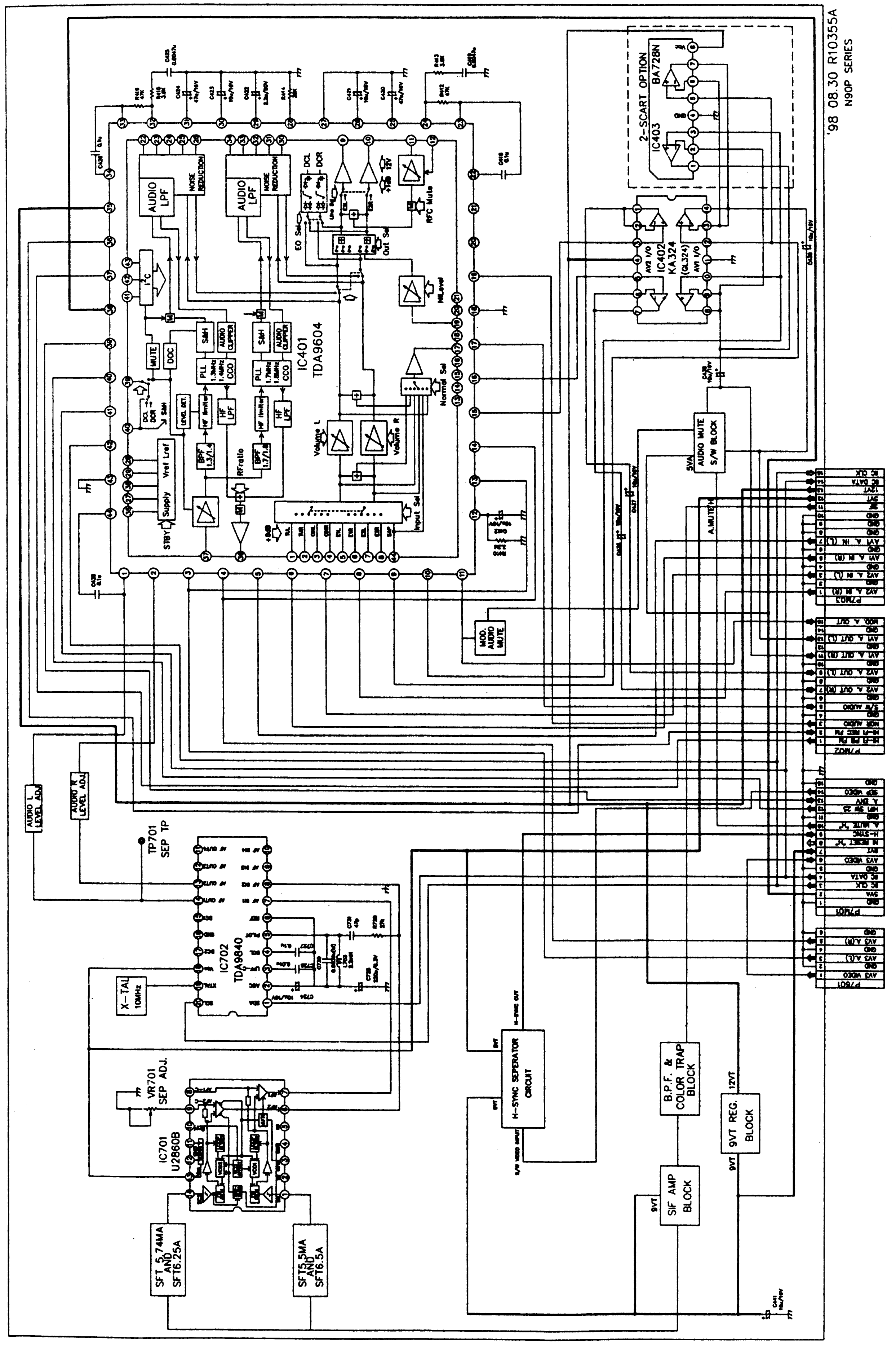
REC(PB)

IC402
KA324

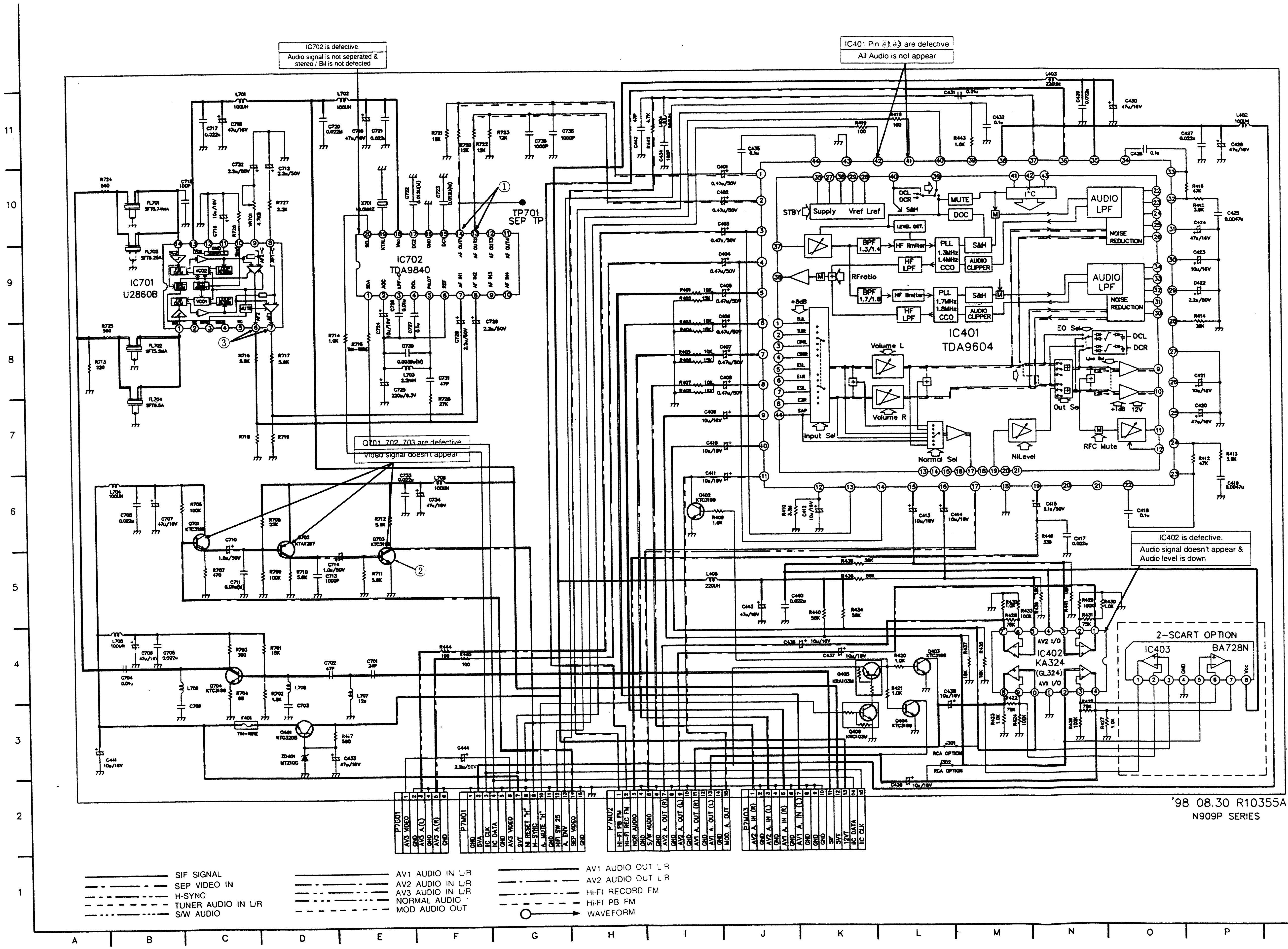
5.06(5.04)	2.89(2.87)	2.89(2.87)	0(0)	2.87(2.86)	2.88(2.86)	4.99(4.97)
				10		
1				5		
4.98(4.96)	2.86(2.85)	2.86(2.85)	11.93(11.88)	2.9(2.89)	2.9(2.89)	5.07(5.05)

★ TR Voltage Sheet

Port / TR NO.	Emitter		Collector		Base	
	PB	REC	PB	REC	PB	REC
Q401	9.33	9.33	11.98	12.01	9.97	9.97
Q402	0	0	0	0	0.64	0.57
Q403	0	0	0	0	0.5	0.5
Q404	0	0	0	0	0.5	0.59
Q405	5.28	5.27	0.5	0.5	5.28	5.25
Q406	0	0	5.25	5.25	0	0
Q701	2.98	2.98	9.47	9.47	3.54	3.54
Q702	5.07	5.07	2.54	2.54	4.92	4.92
Q703	0	0	4.53	4.53	1.71	1.71
Q704	1.01	1.01	8.47	8.47	0.39	0.39


'98 08.30 R10355A
N90P SERIES
2-SCART OPTION
IC403
BA7288N
IC402
KA324
AV2 I/O
AV1 I/O
IC401
TDA9604
AUDIO LPF
NOISE REDUCTION
AUDIO MUTE S/W BLOCK
MOD. AUDIO MUTE
AUDIO L LEVEL ADJ.
AUDIO R LEVEL ADJ.
TP701
SEP TP
IC702
TDA9840
X-TAL
10MHz
VR701
SEP ADJ.
IC701
U2860B
SFT 5.74MA AND SFT6.25A
SFT5.5MA AND SFT6.5A
H-SYNC SEPERATOR CIRCUIT
B.P.F. & COLOR TRAP BLOCK
9VT REG. BLOCK
12VT
9VT
SIF AMP BLOCK

5. Hi-Fi, A2 Circuit Diagram


IC702 is defective.
Audio signal is not seperated & stereo / Bil is not defected

IC401 Pin ㊶,㊷ are defective
All Audio is not appear

Q701, 702, 703 are defective
Video signal doesn't appear.

IC402 is defective.
Audio signal doesn't appear & Audio level is down

'98 08.30 R10355A
N909P SERIES

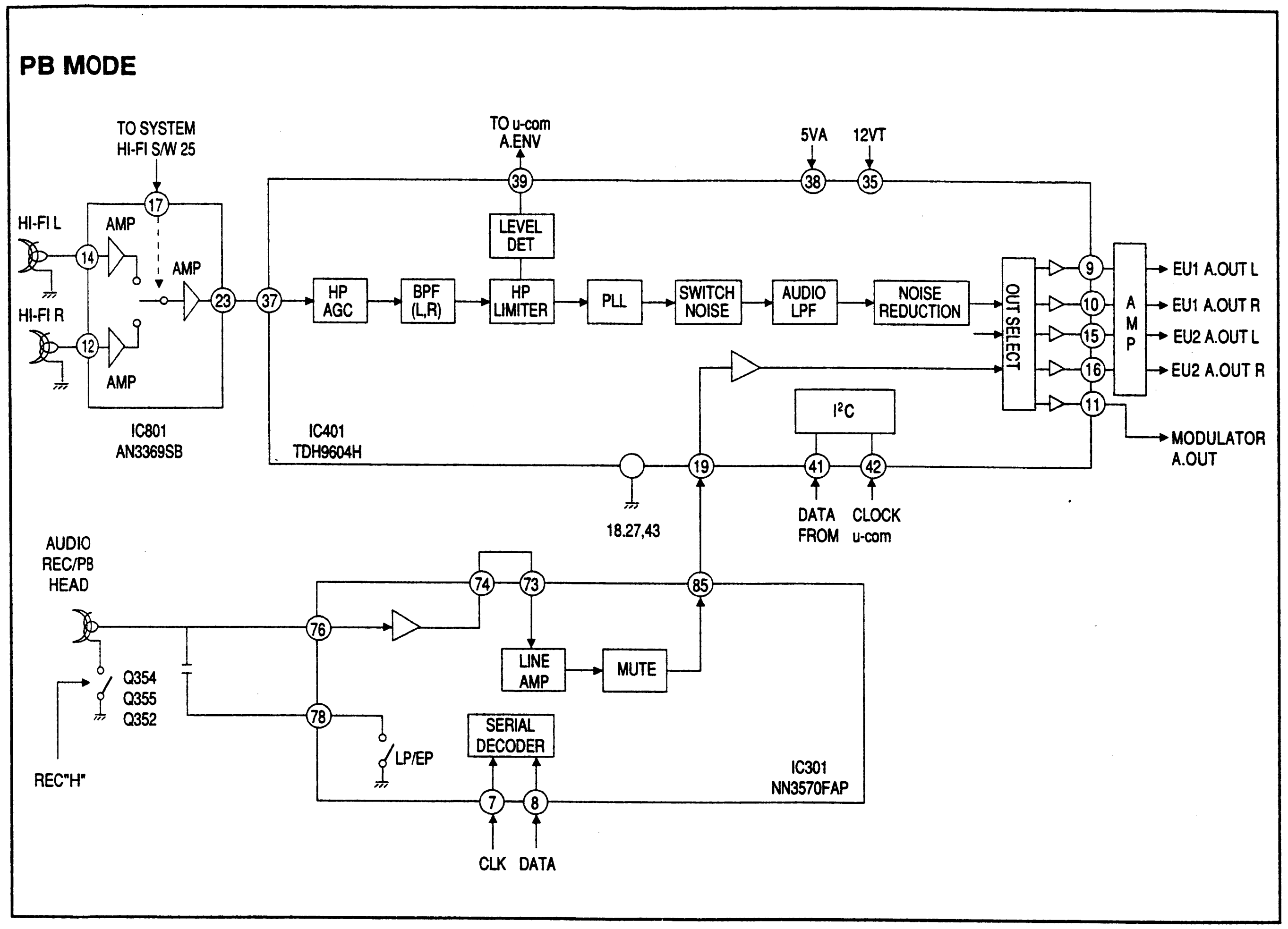
IC701
U2860B
IC702
TDA9840
IC401
TDA9604
IC402
KA324
(GL324)
IC403
BA728N
2-SCART OPTION
AV2 I/O
AV1 I/O
TP701
SEP TP
STBY
Supply
Vref Lref
MUTE
DOC
I²C
AUDIO LPF
NOISE REDUCTION
BPF 1.3/1.4
BPF 1.7/1.8
HF limiter
HF LPF
PLL 1.3MHz 1.4MHz
PLL 1.7MHz 1.8MHz
CCO
S&H
AUDIO CLIPPER
LEVEL DET.
RFratio
+8dB
Volume L
Volume R
Input Sel
Normal Sel
NILevel
RFC Mute
EO Sel
DCL
DCR
Out Sel
+1dB
12V
Q701 KTC3198
Q702 KTA1267
Q703 KTC3198
Q704 KTC3198
Q401 KTC3205
Q402 KTC3198
Q403 KTC3198
Q404 KTC3198
Q405 KRA103M
Q406 KRC103M
ZD401 MTZ10C
F401
FL701
FL702
FL703
FL704
X701
VR701
J301 RCA OPTION
J302 RCA OPTION
①
②
③
P7601
AV3 VIDEO
GND
AV3 A.(L)
GND
AV3 A.(R)
GND
P7M01
GND
5VA
IIC CLK
IIC DATA
GND
AV3 VIDEO
9VT
N RESET "H"
H-SYNC
A. MUTE "H"
GND
HIFI SW 25
A. ENV
SEP VIDEO
GND
P7M02
Hi-Fi PB FM
Hi-Fi REC FM
NOR AUDIO
GND
S/W AUDIO
GND
AV2 A. OUT (R)
GND
AV2 A. OUT (L)
GND
AV1 A. OUT (R)
GND
AV1 A. OUT (L)
GND
MOD. A. OUT
P7M03
AV2 A. IN (R)
GND
AV2 A. IN (L)
GND
AV1 A. IN (R)
GND
AV1 A. IN (L)
GND
GND
GND
SIF
5VT
12VT
IIC DATA
IIC CLK
SIF SIGNAL
SEP VIDEO IN
H-SYNC
TUNER AUDIO IN L/R
S/W AUDIO
AV1 AUDIO IN L/R
AV2 AUDIO IN L/R
AV3 AUDIO IN L/R
NORMAL AUDIO
MOD AUDIO OUT
AV1 AUDIO OUT L R
AV2 AUDIO OUT L R
Hi-FI RECORD FM
Hi-FI PB FM
WAVEFORM
11
10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q

LOCATION GUIDE

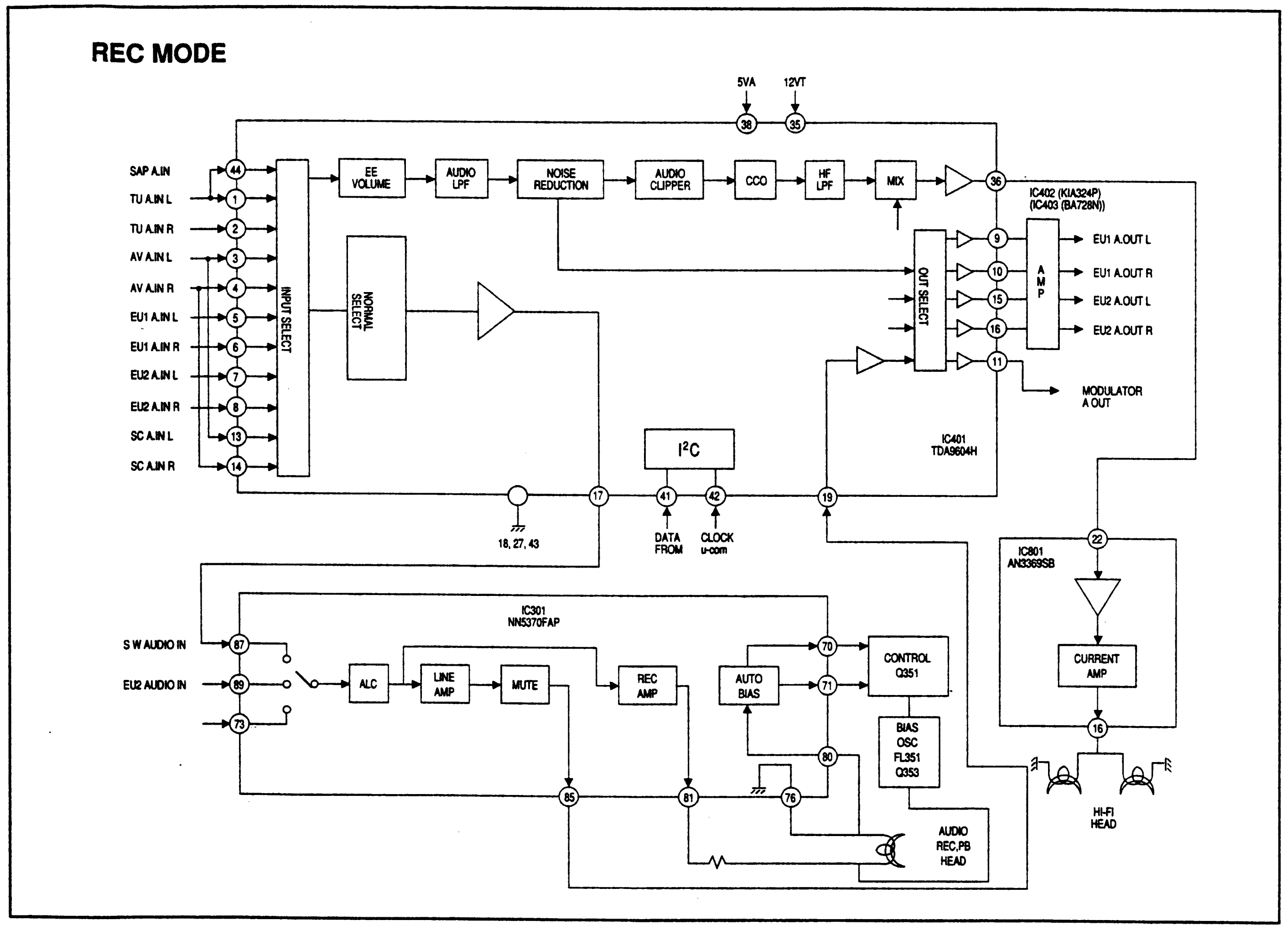
C401	J10	L703	E8
C402	J10	L704	B6
C403	J10	L705	B4
C404	J9	L706	D4
C405	J9	L707	E4
C406	J8	L708	F6
C407	J8	L709	C4
C408	J8	P7601	E2
C409	I7	P7M01	F2
C410	I7	P7M02	H2
C411	I6	P7M03	J2
C412	K6	Q401	D3
C413	L6	Q402	I6
C414	L6	Q403	L4
C415	N6	Q404	L3
C417	N5	Q405	K4
C418	O6	Q406	K3
C419	P6	Q701	C6
C420	P7	Q702	D6
C421	P8	Q703	E6
C422	P9	Q704	C4
C423	P9	R401	I9
C424	P10	R402	I9
C425	P10	R403	I8
C426	O11	R404	I8
C427	P11	R405	I8
C428	P11	R406	I8
C429	N11	R407	I8
C430	O11	R408	I7
C431	L11	R409	I6
C432	M11	R410	J6
C433	E3	R412	P7
C434	I10	R413	P7
C435	J11	R414	P8
C436	J4	R415	P10
C437	K4	R416	P10
C438	L4	R417	E3
C439	L2	R418	L11
C440	J5	R419	K11
C441	A3	R420	L4
C442	H11	R421	L4
C443	J5	R422	M3
C444	F3	R423	M3
C701	E4	R424	M3
C702	D4	R425	N3
C703	D3	R426	N3
C704	B4	R427	N3
C705	B4	R428	M4
C706	B4	R429	N5
C707	B6	R430	N5
C708	B6	R431	N4
C709	C3	R432	M5
C710	C6	R433	M5
C711	C5	R434	K5
C712	D10	R435	M4
C713	D5	R436	K5
C714	D5	R437	M4
C715	C10	R438	K5
C716	C10	R439	N5
C717	C11	R440	K5
C718	C11	R441	N5
C719	E11	R442	I11
C720	E11	R443	M11
C721	E11	R444	F4
C722	F10	R445	F4
C723	F10	R446	N6
C724	E8	R701	D4
C725	E8	R702	D4
C726	E9	R703	C4
C727	F8	R704	C4
C728	F8	R705	C6
C729	G8	R707	C5
C730	E8	R708	D6
C731	F8	R709	D5
C732	C10	R710	D5
C733	E6	R711	E5
C734	F6	R712	E6
C735	H11	R713	A8
C736	G11	R714	D8
F401	C3	R715	E8
FL701	B10	R716	C8
FL702	B8	R717	D8
FL703	B9	R718	C7
FL704	B7	R719	D7
IC401	M8	R720	F11
IC402	N4	R721	F11
IC403	O4	R722	F11
IC701	B9	R723	G11
IC702	E9	R724	B10
J301	L3	R725	B8
J302	L3	R726	C10
L402	P11	R727	D10
L403	N12	R728	F7
L404	I11	TP701	G10
L405	I5	VR701	D10
L701	C11	X701	E10
L702	E11	ZD401	D3

6. Hi-Fi Block Diagram

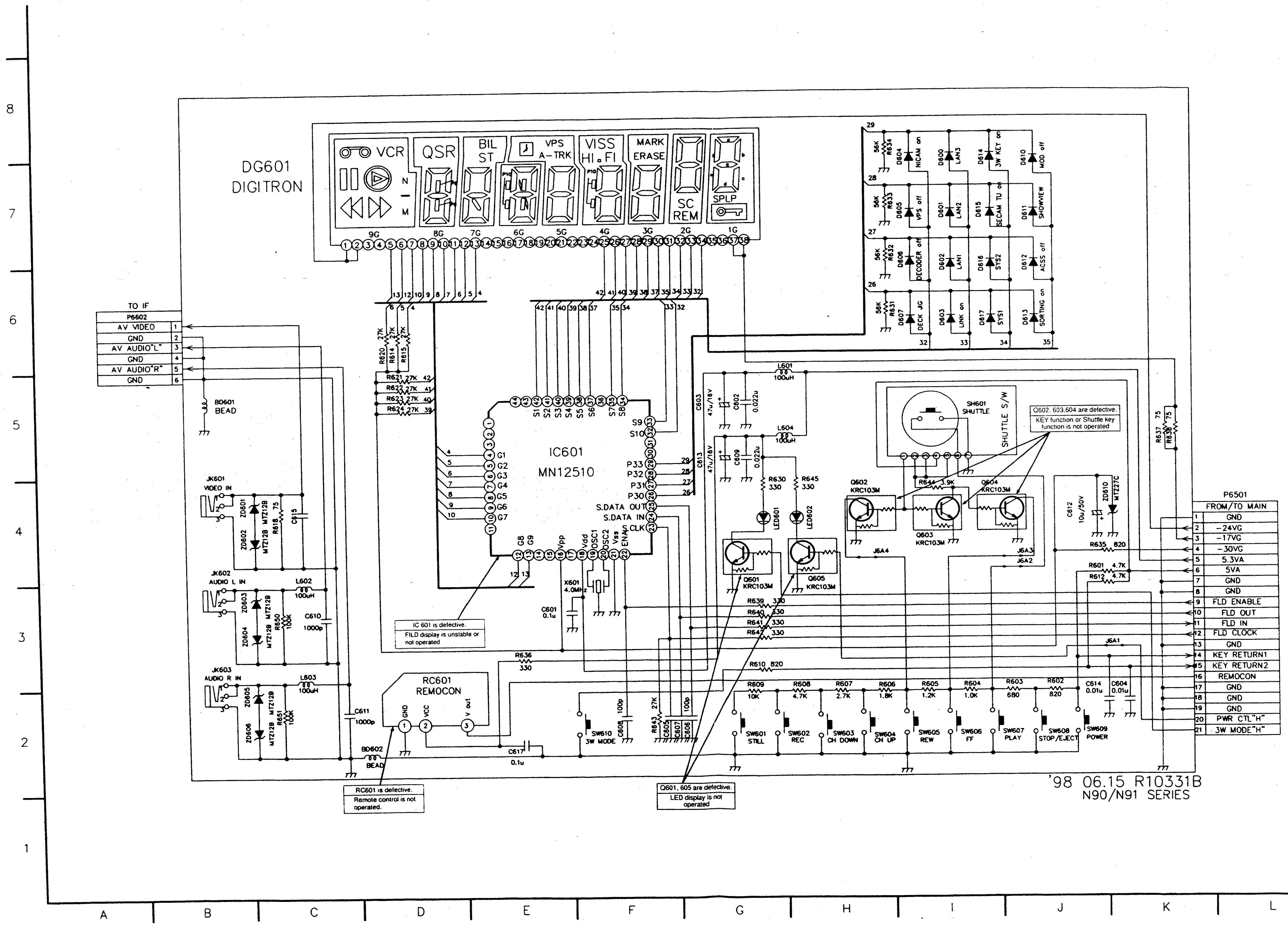
PB MODE


TO SYSTEM
HI-FI S/W 25
TO u-com
A.ENV
5VA
12VT
HI-FI L
HI-FI R
AMP
AMP
AMP
17
14
12
23
37
HP
AGC
BPF
(L,R)
LEVEL
DET
HP
LIMITER
PLL
SWITCH
NOISE
AUDIO
LPF
NOISE
REDUCTION
OUT SELECT
39
38
35
9
10
15
16
11
A
M
P
EU1 A.OUT L
EU1 A.OUT R
EU2 A.OUT L
EU2 A.OUT R
MODULATOR
A.OUT
I²C
41
42
19
DATA
FROM
CLOCK
u-com
18.27,43
IC801
AN3369SB
IC401
TDH9604H
AUDIO
REC/PB
HEAD
Q354
Q355
Q352
REC"H"
76
78
74
73
85
LINE
AMP
MUTE
SERIAL
DECODER
LP/EP
7
8
CLK
DATA
IC301
NN3570FAP

REC MODE


5VA
12VT
38
35
SAP A.IN
TU A.IN L
TU A.IN R
AV A.IN L
AV A.IN R
EU1 A.IN L
EU1 A.IN R
EU2 A.IN L
EU2 A.IN R
SC A.IN L
SC A.IN R
44
1
2
3
4
5
6
7
8
13
14
INPUT SELECT
EE
VOLUME
AUDIO
LPF
NOISE
REDUCTION
AUDIO
CLIPPER
CCO
HF
LPF
MIX
36
IC402 (KIA324P)
(IC403 (BA728N))
NORMAL
SELECT
OUT SELECT
9
10
15
16
11
A
M
P
EU1 A.OUT L
EU1 A.OUT R
EU2 A.OUT L
EU2 A.OUT R
MODULATOR
A OUT
IC401
TDA9604H
I²C
17
41
42
19
18, 27, 43
DATA
FROM
CLOCK
u-com
22
IC801
AN3369SB
CURRENT
AMP
16
HI-FI
HEAD
IC301
NN5370FAP
S W AUDIO IN
EU2 AUDIO IN
87
89
73
ALC
LINE
AMP
MUTE
REC
AMP
AUTO
BIAS
70
71
80
CONTROL
Q351
BIAS
OSC
FL351
Q353
85
81
76
AUDIO
REC,PB
HEAD

7. Timer Circuit Diagram


DG601
DIGITRON
VCR
QSR
BIL
ST
VPS
A-TRK
VISS
HI-FI
MARK
ERASE
SC
REM
SPLP
N
M
9G
8G
7G
6G
5G
4G
3G
2G
1G
IC601
MN12510
G1
G2
G3
G4
G5
G6
G7
G8
G9
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
P33
P32
P31
P30
S.DATA OUT
S.DATA IN
CLK
Vpp
Vdd
OSC1
OSC2
Vss
ENA
X601
4.0MHz
C601
0.1u
TO IF
P6602
AV VIDEO
GND
AV AUDIO"L"
GND
AV AUDIO"R"
GND
BD601
BEAD
JK601
VIDEO IN
JK602
AUDIO L IN
JK603
AUDIO R IN
ZD601
ZD602
ZD603
ZD604
ZD605
ZD606
MTZ12B
R618 75
C615
L602
100uH
L603
100uH
R650
100K
R651
100K
C610
1000p
C611
1000p
BD602
BEAD
RC601
REMOCON
GND
VCC
V out
R636
330
C617
0.1u
R620 27K
R614 27K
R615 27K
R621 27K
R622 27K
R623 27K
R624 27K
L601
100uH
L604
100uH
C603
47u/16V
C602
0.022u
C613
47u/16V
C609
0.022u
R630
330
R645
330
LED601
LED602
Q601
KRC103M
Q605
KRC103M
Q602
KRC103M
Q603
KRC103M
Q604
KRC103M
R644 3.9K
J6A4
J6A3
J6A2
J6A1
SH601
SHUTTLE
SHUTTLE S/W
R639 330
R640 330
R641 330
R642 330
R610 820
R609 10K
R608 4.7K
R607 2.7K
R606 1.8K
R605 1.2K
R604 1.0K
R603 680
R602 820
R643 27K
C605
C607
C606
C608
100p
SW610
3W MODE
SW601
STILL
SW602
REC
SW603
CH DOWN
SW604
CH UP
SW605
REW
SW606
FF
SW607
PLAY
SW608
STOP/EJECT
SW609
POWER
C614
0.01u
C604
0.01u
C612
10u/50V
ZD610
MTZ27C
R635 820
R601 4.7K
R612 4.7K
R637 75
R638 75
R634 56K
R633 56K
R632 56K
R631 56K
D604 NICAM on
D600 LAN3
D614 3W KEY on
D610 MOD off
D605 VPS off
D601 LAN2
D615 SECAM TU on
D611 SHOWVIEW
D606 DECODER off
D602 LAN1
D616 SYS2
D612 ACSS off
D607 DECK JG
D603 LINK on
D617 SYS1
D613 SORTING on
P6501
FROM/TO MAIN
1 GND
2 -24VG
3 -17VG
4 -30VG
5 5.3VA
6 5VA
7 GND
8 GND
9 FLD ENABLE
10 FLD OUT
11 FLD IN
12 FLD CLOCK
13 GND
14 KEY RETURN1
15 KEY RETURN2
16 REMOCON
17 GND
18 GND
19 GND
20 PWR CTL"H"
21 3W MODE"H"
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
M

IC 601 is defective.
FILD display is unstable or not operated

Q602, 603,604 are defective.
KEY function or Shuttle key function is not operated

RC601 is defective.
Remote control is not operated.

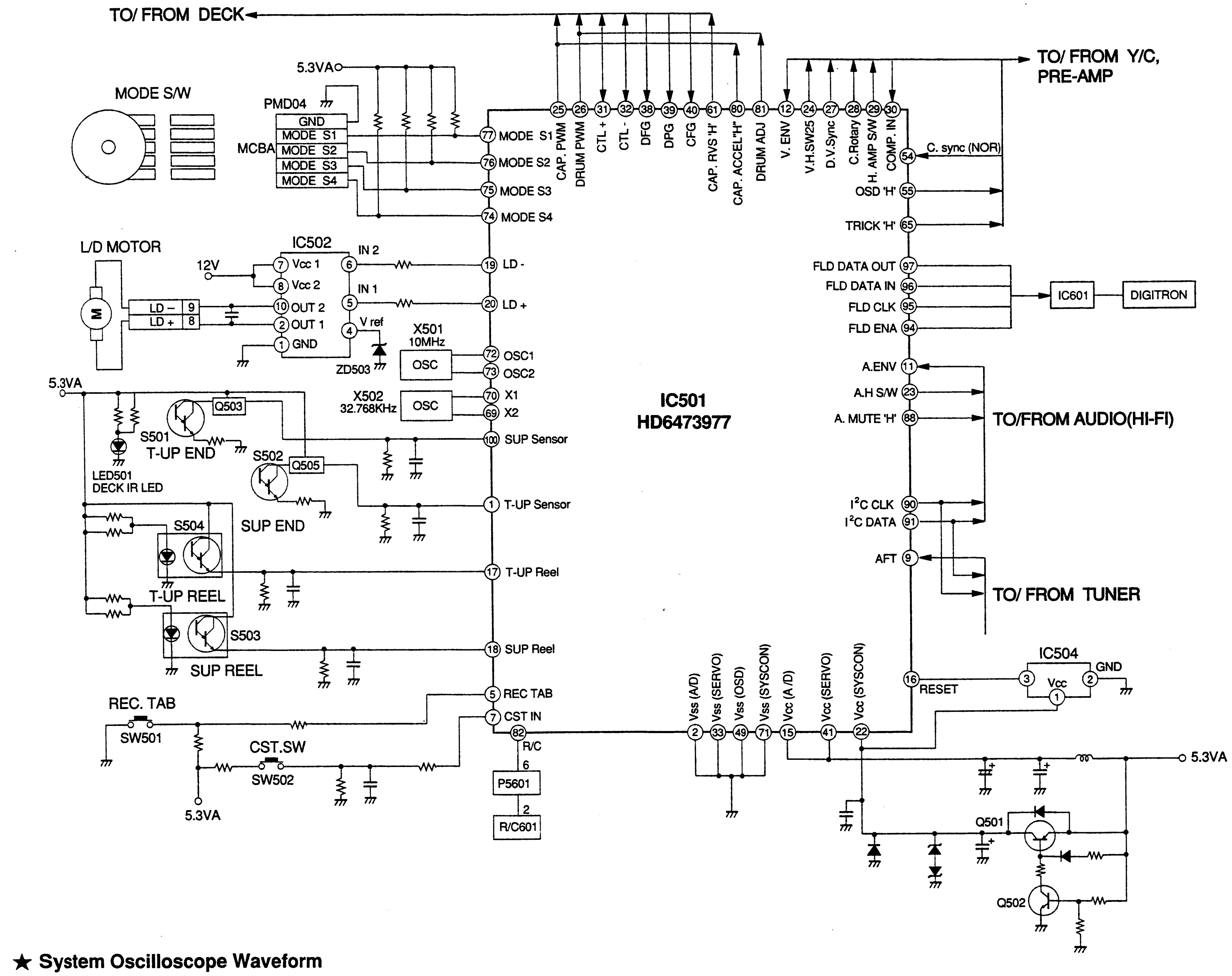
Q601, 605 are defective.
LED display is not operated

'98 06.15 R10331B
N90/N91 SERIES

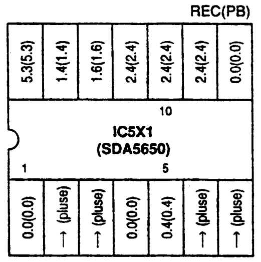
LOCATION GUIDE

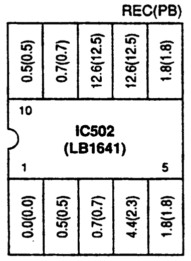
BD601	B5
BD602	D2
C601	E3
C602	G5
C603	G5
C604	K2
C605	F2
C606	G2
C607	F2
C608	F2
C609	G5
C610	C3
C611	C2
C612	J4
C613	G5
C614	J2
C615	C4
C617	E2
D600	I7
D601	I7
D602	I6
D603	I6
D604	I7
D605	I7
D606	I6
D607	I6
D610	J7
D611	J7
D612	J6
D613	J6
D614	I7
D615	I7
D616	I6
D617	I6
DG601	C7
IC601	E5
J6A1	J3
J6A2	J4
J6A3	J4
J6A4	H4
JK601	B4
JK602	B4
JK603	B3
L601	G5
L602	C3
L603	C3
L604	G5
LED601	G4
LED602	H4
P6501	L4
P6602	A6
Q601	G3
Q602	H4
Q603	I4
Q604	I4
Q605	H3
R601	J4
R602	J2
R603	J2
R604	I2
R605	I2
R606	H2
R607	H2
R608	H2
R609	G2
R610	G3
R612	J3
R614	D6
R615	D6
R618	C4
R620	D6
R621	D5
R622	D5
R623	D5
R624	D5
R630	G4
R631	I6
R632	I6
R633	I7
R634	I7
R635	J4
R636	E3
R637	K5
R638	K5
R639	G3
R640	G3
R641	G3
R642	G3
R643	F2
R644	I4
R645	H4
R650	C3
R651	C2
RC601	D3
SH601	I5
SW601	G2
SW602	H2
SW603	H2
SW604	H2
SW605	I2
SW606	I2
SW607	J2
SW608	J2
SW609	J2
SW610	F2
X601	E3
ZD601	B4
ZD602	B4
ZD603	B3
ZD604	B3
ZD605	B2
ZD606	B2
ZD610	K4

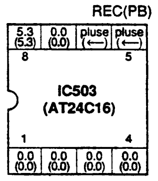
8. System Block Diagram

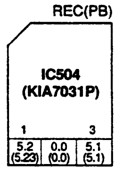

TO/ FROM DECK
TO/ FROM Y/C, PRE-AMP
MODE S/W
5.3VA
PMD04
MCBA
GND
MODE S1
MODE S2
MODE S3
MODE S4
L/D MOTOR
M
LD –
LD +
12V
IC502
Vcc 1
Vcc 2
OUT 2
OUT 1
GND
IN 2
IN 1
V ref
ZD503
X501
10MHz
OSC
X502
32.768KHz
OSC
Q503
S501
T-UP END
S502
Q505
LED501
DECK IR LED
S504
SUP END
T-UP REEL
S503
SUP REEL
REC. TAB
SW501
CST.SW
SW502
5.3VA
IC501
HD6473977
MODE S1
MODE S2
MODE S3
MODE S4
LD -
LD +
OSC1
OSC2
X1
X2
SUP Sensor
T-UP Sensor
T-UP Reel
SUP Reel
REC TAB
CST IN
R/C
P5601
R/C601
CAP. PWM
DRUM PWM
CTL +
CTL -
DFG
DPG
CFG
CAP. RVS 'H'
CAP. ACCEL'H'
DRUM ADJ
V. ENV
V.H.SW25
D.V.Sync
C.Rotary
H. AMP S/W
COMP. IN
C. sync (NOR)
OSD 'H'
TRICK 'H'
FLD DATA OUT
FLD DATA IN
FLD CLK
FLD ENA
IC601
DIGITRON
A.ENV
A.H S/W
A. MUTE 'H'
TO/FROM AUDIO(HI-FI)
I²C CLK
I²C DATA
AFT
TO/ FROM TUNER
RESET
IC504
Vcc
GND
Vss (A/D)
Vss (SERVO)
Vss (OSD)
Vss (SYSCON)
Vcc (A/D)
Vcc (SERVO)
Vcc (SYSCON)
5.3VA
Q501
Q502

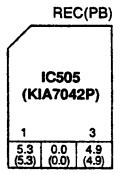
★ IC Voltage Sheet


REC(PB)
5.3(5.3)
1.4(1.4)
1.6(1.6)
2.4(2.4)
2.4(2.4)
2.4(2.4)
0.0(0.0)
10
IC5X1
(SDA5650)
1
5
0.0(0.0)
→ (pluse)
→ (pluse)
0.0(0.0)
0.4(0.4)
→ (pluse)
→ (pluse)


REC(PB)
0.5(0.5)
0.7(0.7)
12.6(12.5)
12.6(12.5)
1.8(1.8)
10
IC502
(LB1641)
1
5
0.0(0.0)
0.5(0.5)
0.7(0.7)
4.4(2.3)
1.8(1.8)


REC(PB)
5.3 (5.3)
0.0 (0.0)
pluse (←)
pluse (←)
8
5
IC503
(AT24C16)
1
4
0.0 (0.0)
0.0 (0.0)
0.0 (0.0)
0.0 (0.0)


REC(PB)
IC504
(KIA7031P)
1
3
5.2 (5.23)
0.0 (0.0)
5.1 (5.1)


REC(PB)
IC505
(KIA7042P)
1
3
5.3 (5.3)
0.0 (0.0)
4.9 (4.9)

★ IC 501 Voltage Sheet

IC NO / MODE / PIN NO	IC501	
	REC	PB
1	0.4	0.4
2	0.0	0.0
3	3.0	3.0
4	2.8	3.0
5	5.0	3.4
6	1.1	1.4
7	1.1	1.4
8	0.4	3.3
9	3.1	3.3
10	3.3	3.3
11	1.8	1.4
12	2.3	3.5
13	5.2	5.2
14	5.2	5.2
15	5.3	5.3
16	5.1	5.1
17	→	pulse
18	→	pulse
19	2.7	5.2
20	5.2	5.2
21	0.0	0.0
22	5.2	5.2
23	→	pulse
24	→	pulse
25	→	pulse
26	→	pulse
27	→	pulse
28	→	pulse
29	→	pulse
30	→	pulse
31	2.8	2.8
32	2.3	2.3
33	0.0	0.0
34	2.7	3.5
35	2.3	2.4
36	2.3	2.3
37	2.3	2.3
38	→	pulse
39	→	pulse
40	→	pulse
41	5.1	5.1
42	5.0	5.0
43	2.4	2.3
44	1.3	1.3
45	2.4	2.3
46	3.1	3.1
47	2.1	2.1
48	1.1	1.1
49	0.0	0.0
50	2.8	1.2

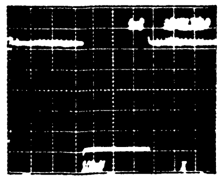
IC NO / MODE / PIN NO	IC501	
	REC	PB
51	1.1	1.1
52	2.5	2.5
53	2.4	2.5
54	0.0	0.4
55	0.0	0.0
56	0.0	0.0
57	2.2	5.2
58	2.1	5.2
59	0.0	0.5
60	0.0	5.1
61	0.0	5.2
62	0.0	0.0
63	0.0	0.0
64	0.0	0.0
65	0.0	0.0
66	0.0	0.0
67	0.0	3.0
68	0.0	0.0
69	1.5	1.5
70	0.9	0.9
71	0.0	0.0
72	2.5	2.5
73	2.3	2.5
74	1.6	4.9
75	1.7	0.0
76	1.7	4.9
77	1.9	4.9
78	3.1	3.1
79	5.2	0.0
80	2.7	2.7
81	1.2	1.3
82	→	pulse
83	5.2	5.2
84	0.0	0.0
85	0.0	2.0
86	→	pulse
87	→	pulse
88	0.0	0.0
89	2.5	3.0
90	→	pulse
91	→	pulse
92	→	pulse
93	→	5.1
94	→	pulse
95	→	pulse
96	→	pulse
97	→	pulse
98	0.0	5.2
99	3.7	2.5
100	0.5	0.6

★ TR Voltage Sheet

TR NO. \ Port	Emitter		Collector		Base	
	PB	REC	PB	REC	PB	REC
Q501	5.3	5.3	5.3	5.3	4.6	4.5
Q502	0.0	0.0	0.0	0.0	0.7	0.7
Q503	5.3	5.3	0.2	0.3	4.8	4.8
Q504	2.8	3.0	0.0	0.0	2.2	2.3
Q505	5.3	5.3	0.1	0.5	4.7	4.7
Q506	9.4	9.4	9.4	9.4	8.7	8.7
Q507	0.0	0.0	0.0	0.0	5.0	5.0
Q509	12.9	13.0	12.9	13.0	12.1	12.2
Q510	2.7	0.1	2.7	2.5	3.4	0.0
Q511	0.0	0.0	0.0	0.0	5.2	5.2
Q512	0.0	0.0	pulse	pulse	pulse	pulse
Q513	0.0	0.0	pulse	pulse	pulse	pulse
Q515	0.0	0.0	12.4	0.0	0.0	0.0
Q519	5.0	5.0	9.4	9.4	5.6	5.6
Q521	0.0	0.0	12.6	0.3	0.0	0.0
Q5X1	1.1	1.1	5.3	5.3	1.7	1.7

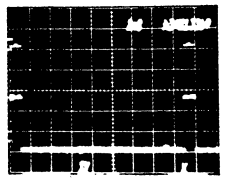
★ System Oscilloscope Waveform

①



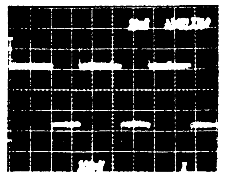
IC501 Pin 24
100mV/5ms
REC/PB
(V.H/SW)

②



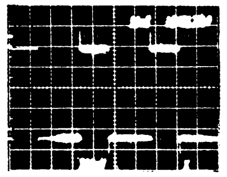
IC501 Pin 27
1V/2mS
QUE/REV
(D.V-SYNC)

③



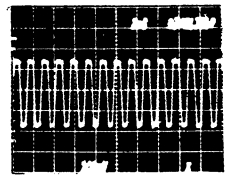
IC501 Pin 31
100mV/10mS
PB
(CTL+)

④



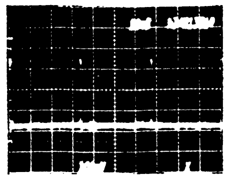
IC501 Pin 32
100mV/10mS
(CTL-)

⑤



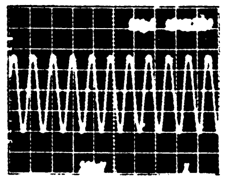
IC501 Pin 38
100mV/2mS
REC/PB
(DFG)

⑥



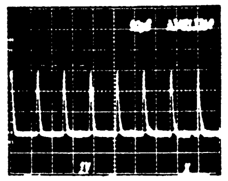
IC501 Pin 39
100mV/10μS
REC/PB
(DPG)

⑦



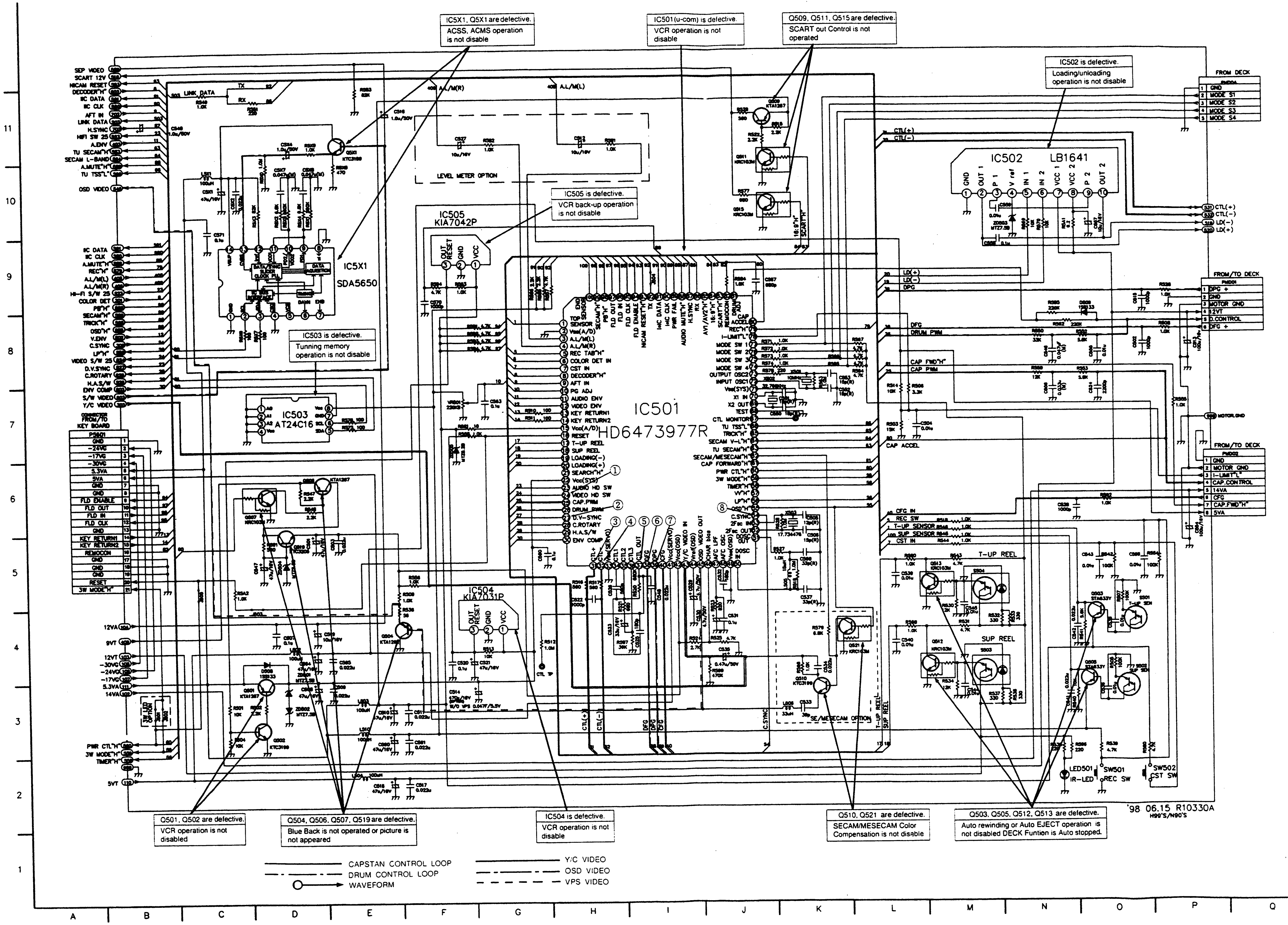
IC501 Pin 40
100mV/500μS
REC/PB
(CFG)

⑧



IC501 Pin 54
1V/50μS
REC/PB
(C-SYNC NRMAC)

8. System Circuit Diagram



IC5X1, Q5X1 are defective.
ACSS, ACMS operation is not disable

IC501(u-com) is defective.
VCR operation is not disable

Q509, Q511, Q515 are defective.
SCART out Control is not operated

IC502 is defective.
Loading/unloading operation is not disable

IC505 is defective.
VCR back-up operation is not disable

IC503 is defective.
Tunning memory operation is not disable

Q501, Q502 are defective.
VCR operation is not disabled

Q504, Q506, Q507, Q519 are defective.
Blue Back is not operated or picture is not appeared

IC504 is defective.
VCR operation is not disable

Q510, Q521 are defective.
SECAM/MESECAM Color Compensation is not disable

Q503, Q505, Q512, Q513 are defective.
Auto rewinding or Auto EJECT operation is not disabled DECK Funtion is Auto stopped.

'98 06.15 R10330A
H99'S/N90'S

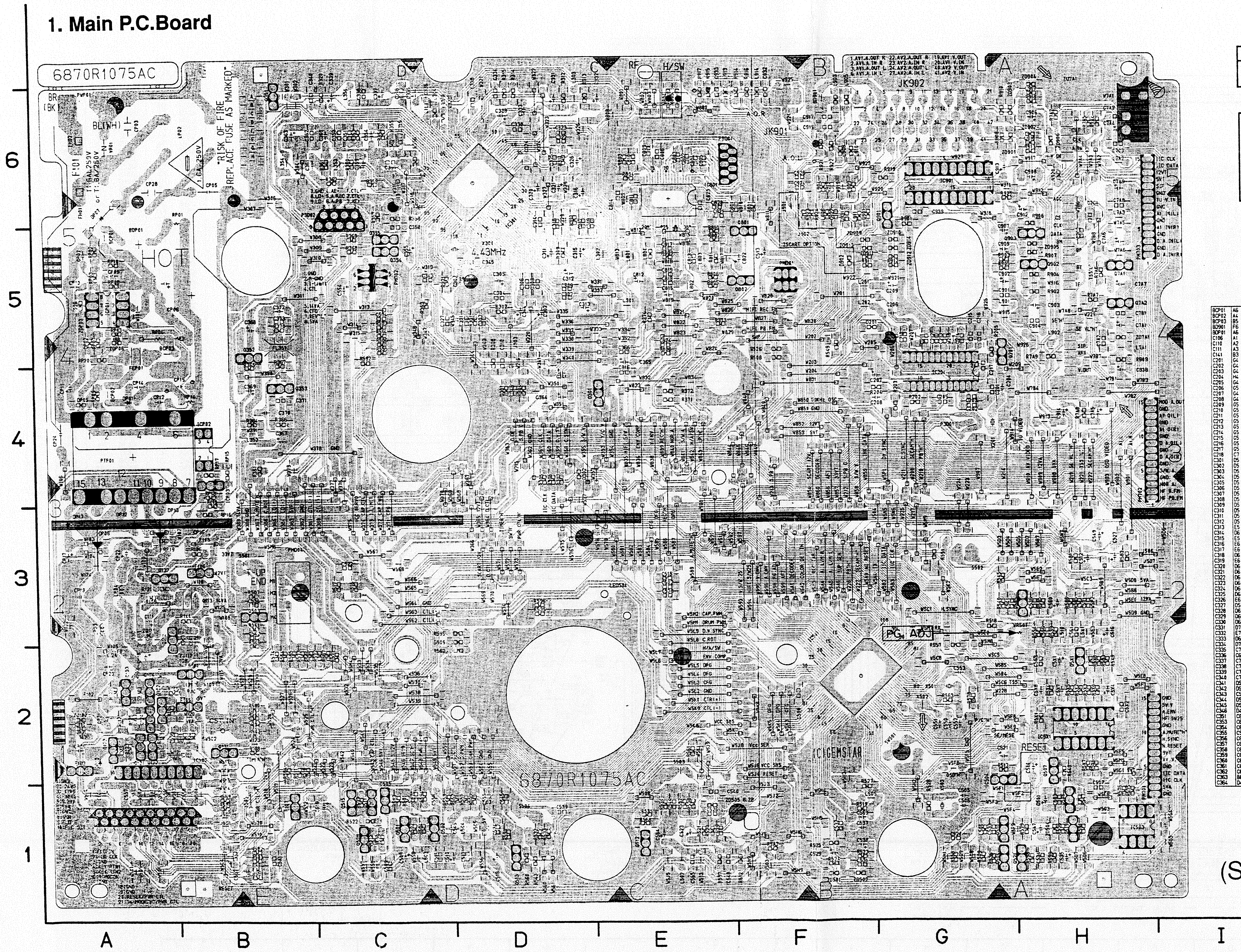
CAPSTAN CONTROL LOOP
DRUM CONTROL LOOP
WAVEFORM
Y/C VIDEO
OSD VIDEO
VPS VIDEO

LOCATION GUIDE

C501	D5	LED501	N2	R575	E7
C502	O8	P5601	A7	R576	E7
C503	E5	PMD01	P9	R577	J10
C504	L7	PMD02	P6	R578	J7
C505	K5	PMD04	Q11	R579	K4
C506	K5	Q501	C3	R580	O2
C507	D4	Q502	D2	R581	H10
C508	D3	Q503	O4	R582	G10
C509	E3	Q504	E4	R583	E11
C510	E3	Q505	O3	R584	J9
C511	F3	Q506	D6	R585	G8
C512	H11	Q507	C5	R586	G8
C513	P8	Q509	J11	R591	D5
C514	F3	Q510	K3	R592	O6
C515	O8	Q511	J10	R593	F9
C516	F11	Q512	M4	R594	F9
C517	F2	Q513	M5	R595	N8
C518	E2	Q515	J10	R596	N2
C519	D4	Q519	D5	R597	H4
C520	F3	Q521	K4	R598	K3
C521	G3	Q5X1	E10	R599	J3
C522	H4	R501	C3	R5A1	N9
C523	H4	R502	C3	R5A2	C4
C524	O7	R503	L7	R5B1	F8
C525	I4	R504	C2	R5B2	F8
C526	H4	R505	O3	R5B3	F8
C527	F11	R506	L7	R5B4	F8
C528	N6	R507	O4	R5X0	D10
C529	I4	R508	P8	R5X1	D9
C530	I4	R509	F4	R5X2	D9
C531	J4	R510	G7	R5X3	D9
C532	J5	R511	G7	R5X4	D9
C533	K3	R512	G4	R5X5	D9
C534	K3	R513	G4	R5X6	C8
C535	J4	R514	L7	R5X7	D8
C536	O3	R515	K11	R5X8	E10
C537	K4	R516	H5	R5X9	D10
C538	O4	R517	H5	S501	O4
C539	L5	R518	M5	S502	O3
C540	L4	R519	K4	S503	M4
C541	N3	R520	I4	S504	M5
C542	N4	R521	H4	SW501	O2
C543	O5	R522	J11	SW502	O2
C544	M3	R523	J4	VR501	F7
C545	M4	R524	I4	X501	K7
C546	N8	R525	J4	X502	J7
C547	D5	R526	P9	X503	K5
C548	I4	R527	J5	ZD501	D3
C549	C11	R528	K5	ZD502	D3
C550	J7	R529	J11	ZD503	M9
C551	K7	R530	M4	ZD504	D5
C552	K7	R531	M4	ZD505	F6
C553	K7	R532	M4		
C554	P5	R533	N4		
C555	O8	R534	M3		
C556	N7	R535	N2		
C557	O9	R536	F4		
C558	M9	R537	M3		
C559	N10	R538	N3		
C560	E2	R539	O2		
C561	F2	R540	N3		
C563	G7	R541	O4		
C564	D3	R542	O5		
C565	E4	R543	M5		
C566	O5	R544	M5		
C567	J9	R545	M5		
C569	K5	R546	M5		
C570	F8	R547	D6		
C571	C9	R548	D6		
C590	G5	R549	C11		
C5X1	C10	R550	N8		
C5X2	C10	R551	D11		
C5X4	D10	R552	O8		
C5X7	D10	R553	O7		
C5X8	D10	R554	O5		
D508	D3	R555	P7		
D509	O8	R556	F5		
IC501	I7	R557	H8		
IC502	M10	R558	F7		
IC503	D7	R559	N7		
IC504	F4	R560	L5		
IC505	F9	R561	F7		
IC5X1	E9	R562	N8		
J501	B3	R563	K7		
J502	B3	R564	L7		
J503	D4	R565	K7		
J504	I9	R566	K8		
J505	C4	R567	L8		
L502	D4	R568	L4		
L503	E3	R569	N9		
L504	E2	R570	N9		
L505	K4	R571	J8		
L506	K3	R572	J8		
L510	E3	R573	J8		
L5X1	C10	R574	J7		

PRINTED CIRCUIT BOARD DIAGRAMS

1. Main P.C.Board



ABBREVIATIONS

- PG : Pluse Generator
- ADJ : Adjustment

NOTE) ●: Measurement Point

□: Adjustment Point

Emitter : TRANSISTOR
Collector
Base

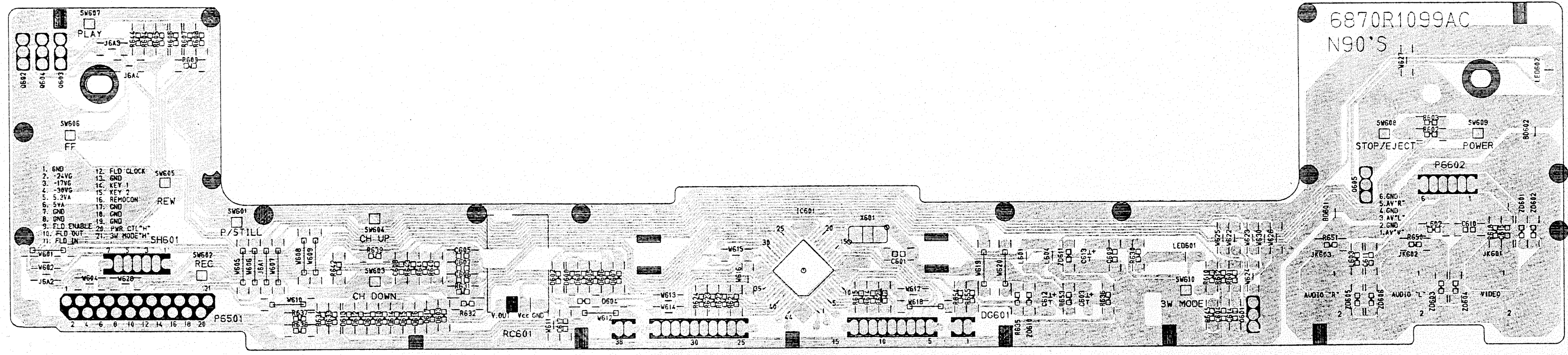
LOCATION GUIDE

BCP01	A6	C365	E5	C7A3	H6	DP08	A3	PMD04	B3	R358	C6	R570	B1	RP02	A5
BCP02	A4	C366	E5	C7A4	H6	DP10	A2	PTP01	A4	R359	C6	R571	C2	RP03	A5
BCP03	B5	C367	B4	C7A5	H4	DP12	A3	PWP01	A7	R360	C6	R572	C2	RP04	B5
BD901	F6	C368	B5	C7A6	H5	DP13	A3	Q102	A2	R361	C6	R573	B2	RP07	A5
BDP01	A6	C369	B4	C7A7	H5	DP17	A3	Q103	A2	R362	C6	R574	B2	RP08	A5
C106	A1	C370	B4	C7A8	H6	F102	A2	Q104	A2	R363	C5	R575	H1	RP09	A4
C110	A2	C371	B4	C7A9	H6	F103	A2	Q112	B3	R364	B4	R576	H1	RP10	A5
C111	A3	C372	B5	C7B1	H5	F104	B2	Q113	B3	R365	B5	R577	C1	RP13	A5
C141	B3	C373	B5	C7C1	H6	F105	B2	Q121	A2	R366	B4	R578	G2	RP14	B4
C201	G4	C501	H1	C7C2	H5	F106	B3	Q122	A2	R367	B5	R579	H1	RP15	B4
C202	G4	C502	E3	C801	F6	F107	B1	Q123	A2	R368	C5	R580	B2	RP16	B4
C203	G4	C503	H1	C802	E6	F108	B3	Q124	A2	R369	C5	R581	H3	RP17	B4
C204	H4	C504	C5	C803	E6	FEP01	A5	Q131	B2	R370	B5	R582	H3	RP18	B4
C205	G4	C505	G1	C804	E6	FH01	A6	Q132	A3	R371	E4	R583	H2	RP19	A3
C206	G5	C506	G1	C805	E6	FH02	A6	Q301	E4	R372	E4	R584	B2	RP20	A5
C207	G4	C507	H1	C806	E6	FL351	B5	Q351	B7	R373	F5	R585	H3	RP21	A2
C208	G4	C508	C1	C809	E6	IC201	G4	Q352	B5	R374	E5	R586	H3	S501	B3
C209	G5	C509	C1	C810	E6	IC502	B2	Q353	B4	R501	C1	R591	H1	S502	G3
C210	G5	C510	D1	C811	E6	IC503	I1	Q354	C5	R502	C1	R592	C5	S503	E1
C211	G5	C511	C1	C812	E5	IC504	H2	Q355	C5	R503	C5	R593	C1	S504	D1
C212	G5	C512	H3	C813	E5	IC505	C1	Q501	C1	R504	C1	R594	C1	SW501	G2
C213	G5	C513	F5	C814	E6	IC5X1	H2	Q502	C1	R505	H3	R595	D3	SW502	B2
C214	G5	C514	H2	C815	E5	IC901	G6	Q503	B3	R506	C5	R596	D3	TU7A1	H6
C215	G5	C515	E3	C816	E5	ICP01	A5	Q504	H1	R507	B3	R597	E1	VR01	A6
C216	G5	C516	H3	C817	E5	ICP02	B4	Q505	H3	R508	F5	R598	H1	VR501	H3
C217	G5	C517	D1	C818	E5	ICP03	B4	Q506	H1	R509	G1	R599	H1	X201	G4
C218	C7	C518	D1	C819	E5	J501	B1	Q507	H2	R510	C2	R5A1	A1	X301	D5
C301	D5	C519	C1	C820	F6	J502	B1	Q509	C1	R511	B2	R5A2	B1	X501	G2
C302	D5	C520	G1	C821	F6	J503	F1	Q510	H1	R512	F1	R5B1	B1	X502	G2
C303	D5	C521	H2	C822	F5	J504	G3	Q511	C1	R513	H2	R5B2	B1	X503	G1
C304	D5	C522	C3	C823	E6	J505	B1	Q512	E1	R514	C5	R5B3	B1	ZD102	A2
C305	D5	C523	E1	C824	E5	J901	F6	Q513	D1	R515	C1	R5B4	B1	ZD111	A3
C306	D5	C524	D1	C901	H5	J902	F6	Q515	C1	R516	C3	R5X0	H2	ZD112	B3
C307	D5	C525	E1	C902	H5	JK901	F7	Q519	H1	R517	C3	R5X1	H2	ZD501	F1
C308	D5	C526	E1	C903	H5	JK902	G6	Q521	H1	R518	G3	R5X2	H2	ZD502	G1
C309	D5	C527	H3	C904	H5	L201	G5	Q5X1	H2	R519	G1	R5X3	H2	ZD503	A1
C310	D5	C528	E3	C905	H5	L202	G5	Q7A1	H5	R520	E1	R5X4	H2	ZD504	H1
C311	D5	C529	F1	C906	H6	L301	E5	Q7A2	H5	R521	E1	R5X5	H2	ZD505	E1
C312	D5	C530	G1	C907	H6	L302	E5	Q801	F6	R522	C1	R5X6	H2	ZD7A1	H5
C313	E5	C531	G1	C908	H6	L303	E7	Q802	F5	R523	G1	R5X7	H2	ZD901	H6
C314	D6	C532	F1	C912	H6	L304	D6	Q901	G6	R524	F1	R5X8	H2	ZD902	H6
C315	E5	C533	G1	C913	H6	L351	C7	Q902	H5	R525	F1	R5X9	H2	ZD903	H6
C316	E6	C534	H1	C914	H4	L352	B4	Q903	H5	R526	F5	R7A2	H6	ZD904	H7
C317	E6	C535	H1	C915	F6	L353	C6	R102	A2	R527	G1	R7A3	H6	ZD909	G5
C318	D6	C536	H3	C917	F6	L354	B6	R103	A2	R528	G1	R7A4	H6	ZD910	G5
C319	E6	C537	G1	C919	F6	L502	E1	R104	B2	R529	C1	R7A5	H6	ZD911	G5
C320	D6	C538	B3	C922	F6	L503	C1	R105	B2	R530	D1	R7A6	H5	ZD912	G5
C321	D6	C539	D1	C924	F6	L504	D1	R106	B3	R531	E1	R7A7	H5	ZD913	G5
C322	D6	C540	E1	C926	F6	L505	G1	R107	B2	R532	D1	R7A8	H4	ZD914	G5
C323	D6	C541	H3	C928	F6	L506	G1	R108	B2	R533	D1	R7A9	H5	ZDP03	A5
C324	D6	C542	B3	C931	F6	L510	H3	R109	A3	R534	E1	R801	F6	ZDP06	A5
C325	D6	C543	B2	C932	F7	L5X1	H3	R111	B3	R535	D3	R802	F5		
C326	E6	C544	E1	C933	F7	L7A1	H5	R119	B4	R536	G1	R803	E6		
C327	D5	C545	D1	C938	H4	L7A2	H6	R122	A2	R537	E1	R804	E6		
C328	D6	C546	D1	CP03	A6	L7A3	H6	R123	A2	R538	E1	R805	E5		
C329	D6	C547	H1	CP05	B6	L801	E5	R125	A2	R539	H3	R806	E5		
C330	D6	C548	F1	CP06	B5	L802	E5	R126	A2	R540	H3	R808	E5		
C331	D7	C549	H3	CP07	A5	L803	E5	R131	A3	R541	B3	R809	E5		
C332	E7	C550	G2	CP09	A5	L804	E5	R132	B2	R542	B2	R810	F6		
C333	D6	C551	G2	CP10	A5	L901	H5	R144	B3	R543	D1	R811	F5		
C334	D7	C552	G2	CP11	A4	L902	H5	R202	G4	R544	B2	R901	G6		
C335	C7	C553	G2	CP12	A4	L903	F6	R203	G4	R545	H3	R902	H5		
C336	C6	C554	C5	CP14	A4	L904	F6	R204	G4	R546	B3	R903	H5		
C337	C7	C555	D1	CP15	B4	L905	F6	R301	D5	R547	H1	R904	H5		
C338	C7	C556	C1	CP16	B3	L906	F6	R302	D5	R548	H2	R905	H5		
C339	C7	C557	A1	CP17	A3	L908	F6	R304	D4	R549	F5	R906	H6		
C340	C7	C558	B1	CP18	A2	L909	G6	R305	D4	R550	D1	R907	H5		
C341	D5	C559	B2	CP19	A3	L910	G6	R306	D4	R551	G2	R908	H6		
C342	D5	C560	H3	CP20	A2	L911	G6	R307	D4	R552	D1	R909	H5		
C343	C5	C561	H3	CP21	A2	L913	F7	R308	D5	R553	D1	R910	H6		
C344	D5	C563	H2	CP22	A3	L914	F7	R309	D5	R554	H3	R911	G5		
C345	D5	C564	E1	CP24	A4	L916	H6	R310	E6	R555	C5	R912	G5		
C346	D4	C565	E1	CP25	A2	L917	H7	R311	D6	R556	H1	R913	H6		
C351	C6	C566	H3	CP28	A6	LED501	E3	R312	D7	R557	G3	R914	F7		
C353	C6	C567	B1	D101	B2	LP02	B6	R313	E7	R558	G1	R915	E7		
C354	C6	C569	G1	D201	G5	LP03	A3	R314	D7	R559	D1	R916	F7		
C355	C5	C570	C1	D301	D4	LP04	A3	R315	D7	R560	D1	R917	E7		
C356	C6	C571	H3	D302	E4	P3D01	G4	R318	D6	R561	E2	R918	H6		
C357	C6	C590	F2	D508	C1	P3D02	C6	R320	C7	R562	D2	R919	G6		
C358	C6	C5X1	H2	D509	D3	P5601	A1	R321	D5	R563	G2	R920	H6		
C359	C6	C5X2	H2	D901	G6	P8D01	F6	R351	B4	R564	B2	R921	F6		
C360	C6	C5X4	H2	D902	F5	PM701	I1	R353	C6	R565	B2	R922	F6		
C361	C6	C5X7	H2	DP01	A4	PM702	I4	R354	C6	R566	C2	R923	F6		
C362	C6	C5X8	H2	DP02	A5	PM703	I5	R355	C6	R567	C2	R924	F6		
C363	B6	C7A1	H5	DP05	A4	PMD01	F5	R356	C6	R568	E1	R925	H6		
C364	D4	C7A2	H5	DP07	A6	PMD02	C5	R357	C6	R569	B1	RP01	B6		

(Solder Side)

2. Timer P.C.Board

(N909P)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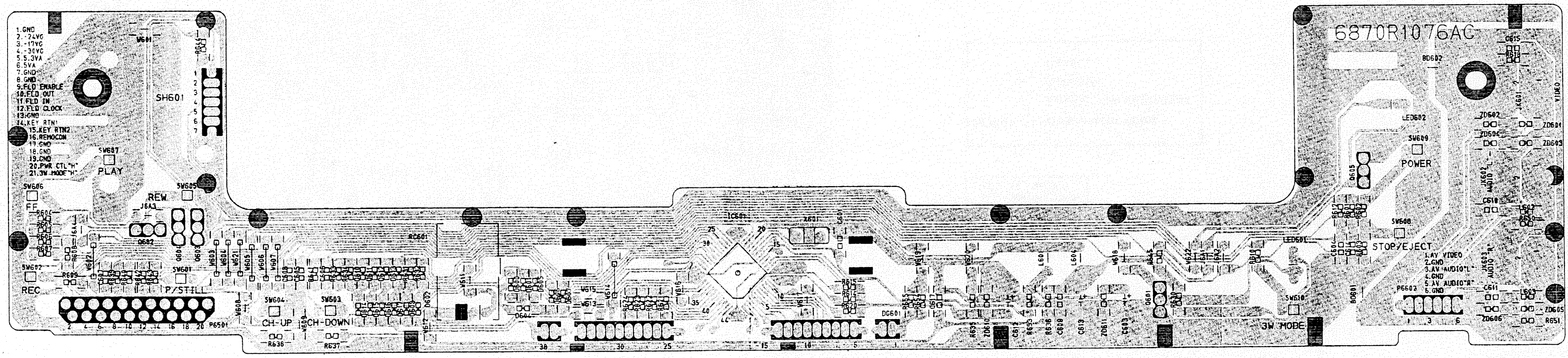
N90'S
PLAY
FF
REW
P/STILL
REC
CH-UP
CH DOWN
SH601
P6501
RC601
IC601
X601
DG601
LED601
3W MODE
STOP/EJECT
POWER
P6602
AUDIO "R"
AUDIO "L"
VIDEO

(Solder Side)

(N919P)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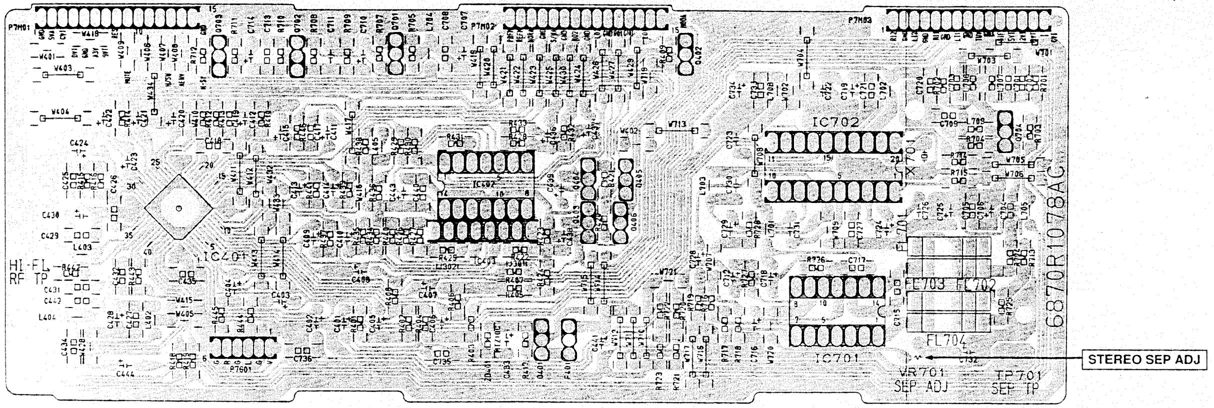
SH601
PLAY
FF
REW
REC
P/STILL
CH-UP
CH-DOWN
P6501
RC601
IC601
X601
DG601
LED601
LED602
POWER
STOP/EJECT
3W MODE
P6602

(Solder Side)

3. Hi-Fi, A2 P.C.Board


P7M01
P7M02
P7M03
IC702
IC402
IC401
IC701
X701
FL701
FL703
FL702
FL704
HI-FI
RF TP
P7601
6870R1078AC
VR701
SEP ADJ
TP701
SEP TP

STEREO SEP ADJ

(Solder Side)

ABBREVIATIONS

- PG : Pluse Generator
- ADJ : Adjustment

NOTE) □ : Adjustment Point

Emitter : TRANSISTOR

Collector

Base

SECTION 4 MECHANISM

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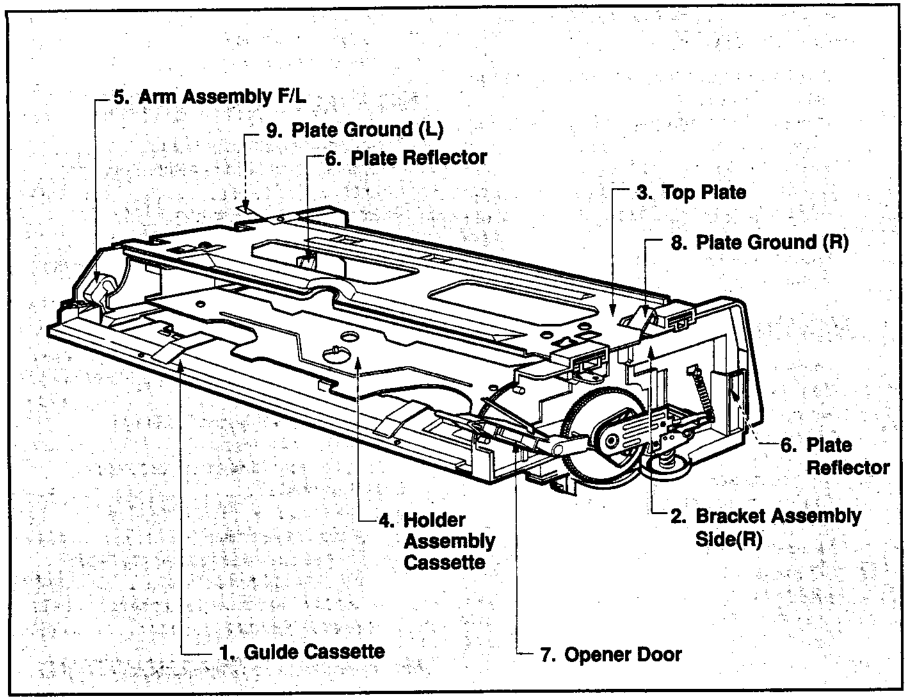
● Front Loading Mechanism Assembly, Parts Location


5. Arm Assembly F/L
9. Plate Ground (L)
6. Plate Reflector
3. Top Plate
8. Plate Ground (R)
6. Plate Reflector
4. Holder Assembly Cassette
2. Bracket Assembly Side(R)
1. Guide Cassette
7. Opener Door

※ **Component list below will be discribed as if the top and bottom covers, front panel and deck mechanism assembly have already been removed.**

1. **Guide Cassette**
2. **Bracket Assembly Side (R)**
3. **Top Plate**
4. **Holder Assembly Cassette**
5. **Arm Assembly F/L**
6. **Plate Reflector**
7. **Opener Door**
8. **Plate Ground(R)**
9. **Plate Ground(L)**

1. Front Loading Mechanism Assembly (Fig. A-1)

1) Remove the Top and Bottom Covers and Front Panel.
2) Remove two screws(A).
3) Lift up the Front Loading Mechanism Assembly in the direction of arrow(B).

NOTE

When disassembling and reassembling:
① Give special attention to removal and to reassembly because two tabs(L), (R) are engaged.

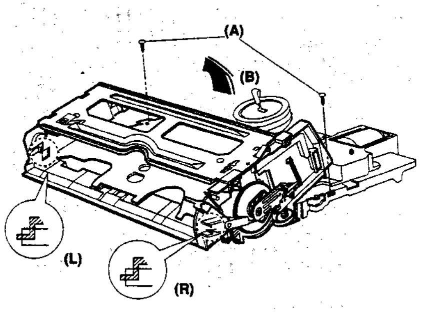


Fig. A-1 Front Loading Mechanism

2. Guide Cassette (Fig. A-2)

1) Push tab(R) of the Cassette Guide and disengage with Bracket Side(R) and push tab(L) of the cassette Guide which is engaged with Bracket Side(L) and remove it in the direction of arrow (B).

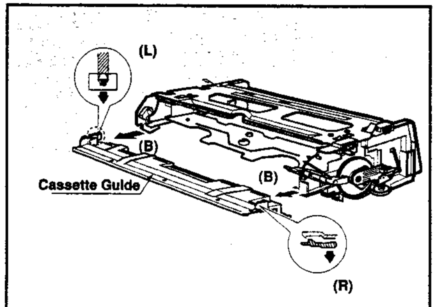

(L)
(B)
Cassette Guide
(B)
(R)

Fig. A-2 Guide Cassette

3. Bracket Assembly Side (R) (Fig. A-3)

1) Push the tabs(L), (R) of Bracket Assembly Side(R) to disengage with the Top Plate and remove it in the direction of arrow(A).

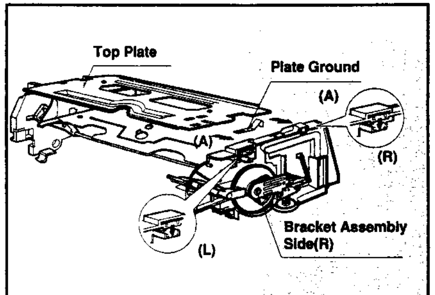

Top Plate
Plate Ground
(A)
(A)
(R)
Bracket Assembly Side(R)
(L)

Fig. A-3 Bracket Assembly Side(R)

4. Bracket Side(L)/Top Plate (Fig. A-4)

1) Remove the screw(B).
2) Remove the plate Ground(L), in the direction of arrow(A).
3) Push the locking tab(L1) and then remove the Bracket Side(L) in the direction of arrow(B).
4) The Top Plate can be removed by Separating the Bracket Side(L).

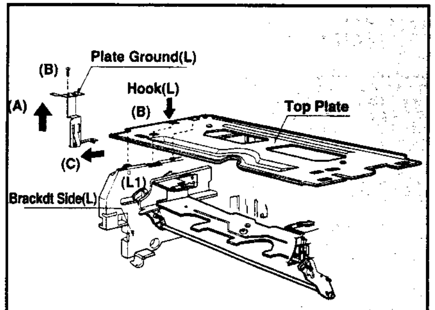


Plate Ground(L)
(B)
Hook(L)
(A)
(B)
Top Plate
(C)
(L1)
Brackdt Side(L)

Fig. A-4 Bracket Side(L)/Top Plate

FRONT LOADING MECHANISM DISASSEMBLY

5. Holder Assembly Cassette (Fig. A-5)

1) Separate the Bracket Assembly Side(R).
2) Push the two lever tabs(L), (R) down and separate the Holder Assembly Cassette and the Arm Assembly F/L from the Top Plate.

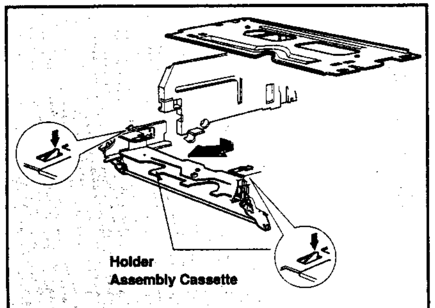

Holder
Assembly Cassette

Fig. A-5 Holder Assembly Cassette

6. Arm Assembly F/L (Fig. A-6)

1) Remove by pulling the Arm F/L(R) from the Bracket Holder(R) Boss in the direction of arrow(A).
2) Separate the Arm Assembly F/L from Cassette Holder Boss in the direction of arrow(B).

NOTE

When disassembling and reassembling:

① Be sure to remove the Arm F/L(R) first. If not the Arm Assembly F/L can be damaged.

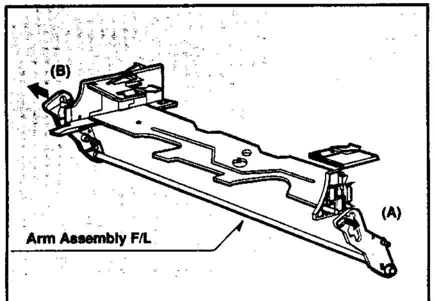

(B)
(A)
Arm Assembly F/L

Fig. A-6 Arm Assembly F/L

7. Spring Stopper (Fig. A-7)

1) Remove the Spring Stopper which is connected to the tabs(A), (B) of the Lever Stopper(R) and the Bracket Holder(R).

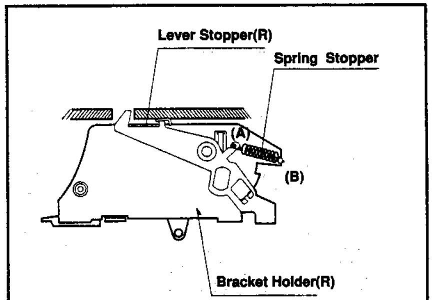

Lever Stopper(R)
Spring Stopper
(A)
(B)
Bracket Holder(R)

Fig. A-7 Spring Stopper

8. Plate Reflector (Fig. A-8)

1) Detach the Plate Reflector(L) from the Bracket Side(L) by using a knife.
2) Detach the Plate Reflector(R) from the Bracket Assembly Side(R) by using a knife.

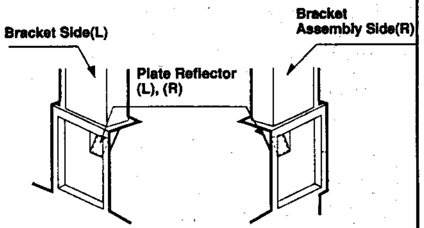
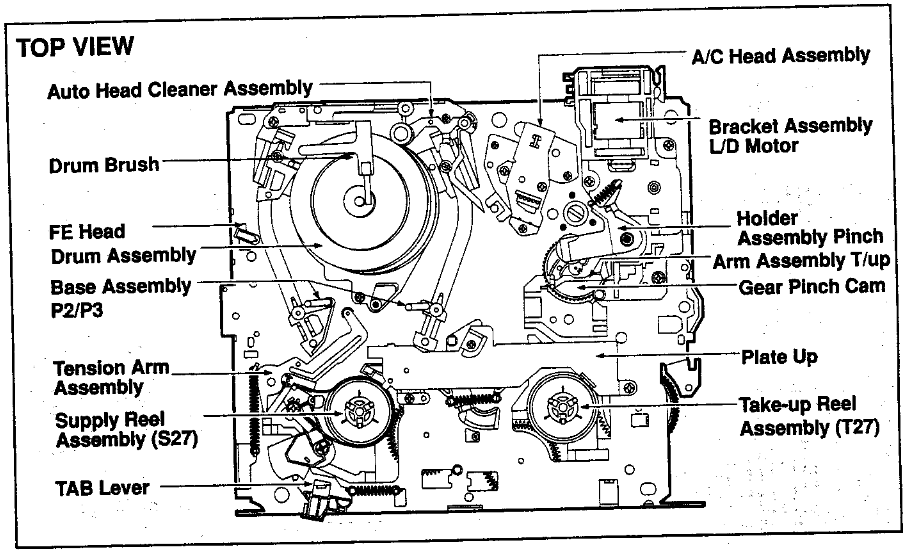
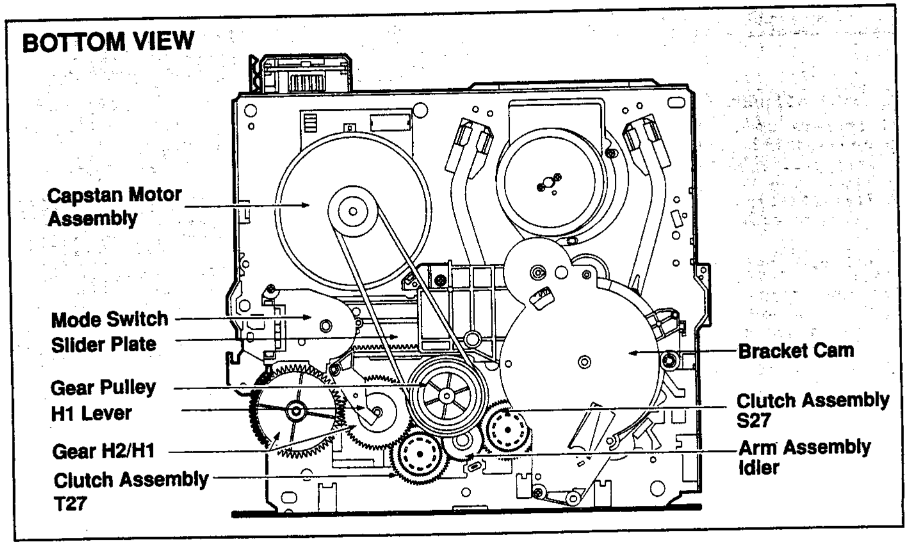

Bracket Side(L)
Bracket
Assembly Side(R)
Plate Reflector
(L), (R)

Fig. A-8 Plate Reflector

DECK MECHANISM DISASSEMBLY

● Deck Mechanism Parts Location


TOP VIEW
A/C Head Assembly
Auto Head Cleaner Assembly
Bracket Assembly
L/D Motor
Drum Brush
Holder
Assembly Pinch
FE Head
Drum Assembly
Arm Assembly T/up
Base Assembly
P2/P3
Gear Pinch Cam
Plate Up
Tension Arm
Assembly
Take-up Reel
Assembly (T27)
Supply Reel
Assembly (S27)
TAB Lever


BOTTOM VIEW
Capstan Motor
Assembly
Mode Switch
Slider Plate
Bracket Cam
Gear Pulley
H1 Lever
Clutch Assembly
S27
Gear H2/H1
Arm Assembly
Idler
Clutch Assembly
T27

1. Auto Head Cleaner Assembly (Fig. B-1)

(Optional Item)

1) Push the tab(A) of Auto Head Cleaner and remove the Cleaner Arm Assembly.

NOTES:

When disassembling and reassembling:

① Do not allow fingers or tools to touch the outside of the Drum.

② Be careful not to get any foreign substance on the Roller.

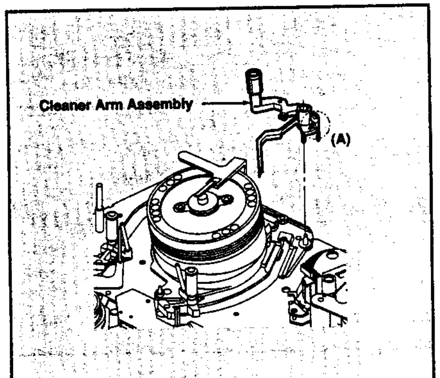


Fig. B-1 Auto head cleaner Assembly

2. Drum and Base Assembly (Fig. B-2)

1) Remove the Auto Head Cleaner Assembly. (option)
2) Remove three screws(A) and separate the Drum Assembly, Drum Base and the Drum Brush from the Deck Mechanism Assembly.
3) Remove three screws(B) on the back side and remove the Drum Assembly from the Drum Base.

NOTES:

When disassembling and reassembling:

① Do not touch the video tips with fingers or tools. Give special attention to disassembling and reassembling of Auto Head Cleaner Assembly.

② After assembling, adjust the tape transport system and Servo PG.

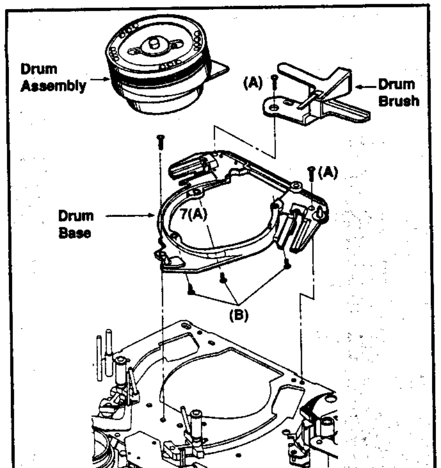


Fig. B-2 Drum and Base Assembly

3. Drum Sub Assembly and Motor Assembly (Fig. B-3-1)

1) Remove the Drum Base from the Deck Mechanism Assembly.
2) Separate the Drum Assembly from the Drum Base.
3) Remove two screws(A) and then remove the rotor.
4) Remove three screws(B) and then remove the stator.

NOTE

When disassembling and reassembling:

① Do not touch the video tips with fingers or tools.

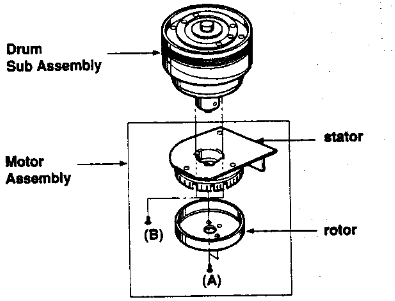


Fig. B-3-1 Drum Sub and Motor Assembly

4. A/C (Audio/Control) Head Assembly (Fig. B-4)

1) Unplug the A/C connector from the Loading Motor P.C.B.
2) Remove two screws(A) and remove the A/C Head Assembly from the Deck Mechanism Assembly.

NOTES:

When disassembling and reassembling:

① When assembling, the 3mm hole of the Base A/C should coincide to 3mm hole in the Chassis.

② Do not touch the A/C Head Tips with fingers or tools.

③ After reinstalling the Audio Control Head Assembly, adjust the Tilt, Azimuth and Height of A/C Head.

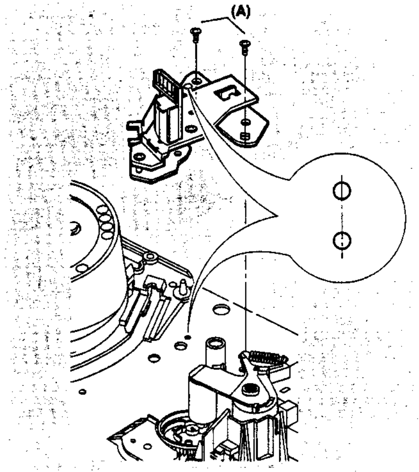


Fig. B-4 A/C Head Assembly

5. FE (Full Erase) Head Assembly (Fig. B-5)

(Optional Item)

1) Push two tabs(A) and remove the FE Head.

NOTE

When disassembling and reassembling:

① Be careful not to get any foreign substance on the FE Head.

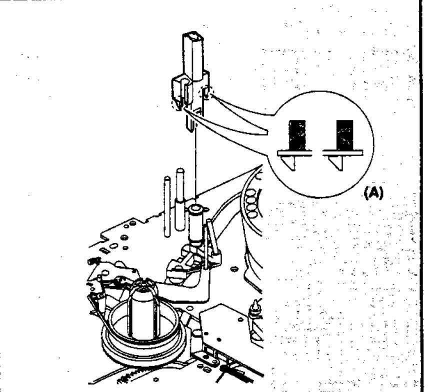


Fig. B-5 FE Head Assembly

6. Plate Up/Supply Main Brake/Take up Main Brake/Body Prism Led Assembly (Fig. B-6)

1) Plate Up
   ① Remove three screws(A) and remove the Plate Up.
2) Supply Main Brake
   ① Remove the Spring MB.
   ② Lift up the Supply Main Brake.
3) Take-Up Main Brake
   ① Lift up the Take-Up Main Brake.
4) Body Prism Led
   ① Remove the Body Prism Led.

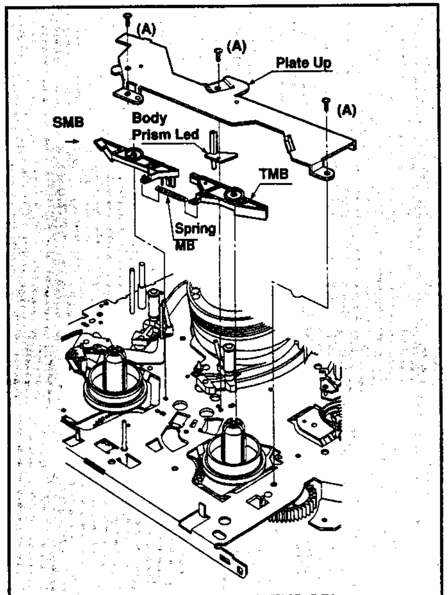

(A)
(A)
Plate Up
(A)
SMB
Body
Prism Led
TMB
Spring
MB

Fig. B-6 Plate up/SMB/TMB/BPL

7. Tension Arm/Lever Assembly Tension (Fig. B-7)

1) Remove the Spring Tension.
2) Push the tab(A) of the Base Tension on the back cover of the Deck Mechanism Assembly outward and remove the Tension Arm Assembly.
3) Push the tab(B) on the back side of the Holder Band(A) and remove the Tension Arm Assembly.
4) Push two tabs(C) on the bottom side of the Lever Tension and Lift up the Lever Assembly Tension.

NOTES:

When disassembling and reassembling:

① (D) is engaged to the cam groove of the Gear Cam L/D and two tabs(C) are engaged in the chassis. (care must be taken not to damage the two tabs when disassembling and reassembling)

② When disassembling, turn to the counterclockwise and lift up so that grease which may be on (D) is not transfered to the Reel Brake Drum.

③ When assembling, the 2.5mm hole of the Lever Assembly Tension should be aligned with the 2.5mm hole in the chassis.

④ After reassembling, adjust the Tension.

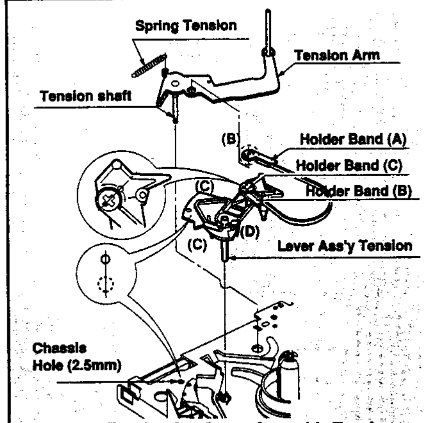

Spring Tension
Tension Arm
Tension shaft
(B)
Holder Band (A)
Holder Band (C)
Holder Band (B)
(C)
(D)
(C)
Lever Ass'y Tension
Chassis
Hole (2.5mm)

Fig. B-7 Tension Arm/Lever Assembly Tension

8. TAB Lever (Fig. B-8)

(Optional Item)

1) Remove the Lever Ass'y Tension.
2) Remove the Spring TAB.
3) Push the tab(A) on the bottom side of TAB Lever and remove the TAB Lever.

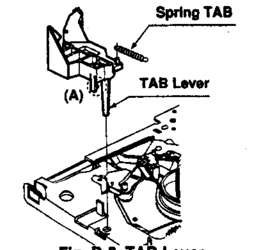

Spring TAB
TAB Lever
(A)

Fig. B-8 TAB Lever

9. Supply Reel/Take Up Reel Assembly (Fig. B-9)

1) Lift up Reel(S), (T) after removing the Plate Up and Band Assembly.

NOTES:

① Be sure not to interchange the Take-up Reel and the Supply Reel.

② Do not allow the Brake Drum to come in contact with grease.

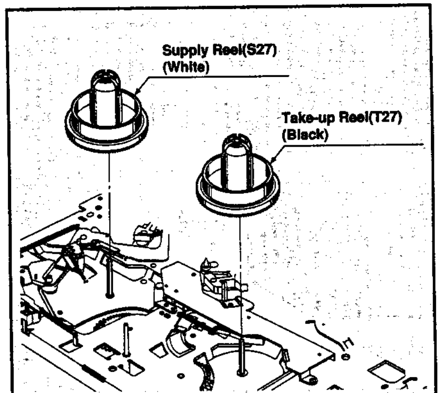

Supply Reel(S27)
(White)
Take-up Reel(T27)
(Black)

Fig. B-9 Supply Reel/Take-up Reel Assembly

10. Gear Pulley/Belt Capstan (Fig. B-10)

1) Turn over the Deck Mechanism Assembly.
2) Remove the Belt Capstan.
3) Remove the washer(A) and then lift up the Gear Pulley.

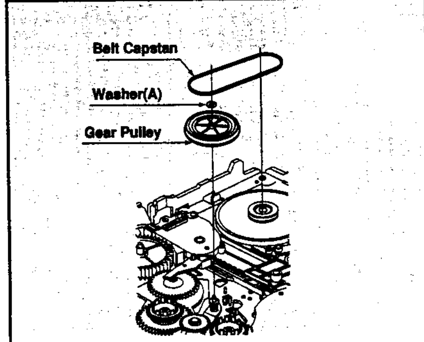

Belt Capstan
Washer(A)
Gear Pulley

Fig. B-10 Gear Pulley/Belt Capstan

11. Gear H1, H2/Lever H1 (Fig. B-11)

1) Push and lift up the hook(B) of Lever H1.
2) Remove the washer(A) and then lift up the Gear H1.
3) Lift up the Spring H1.
4) Push and lift up the hook(B) of the Gear H2.

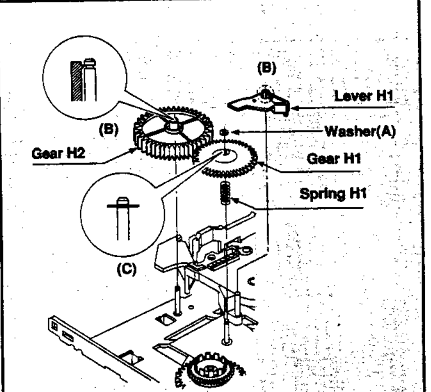

(B)
Lever H1
(B)
Washer(A)
Gear H2
Gear H1
Spring H1
(C)

Fig. B-11 Gear H1,H2/Lever H1

12. Arm Assembly Idler (Fig. B-12)

1) Lift up the Gear Pulley after removing the washer(A).
2) Lift up the Spring Up/D after removing the washer(B).
3) Lift up the Arm Assembly Idler.

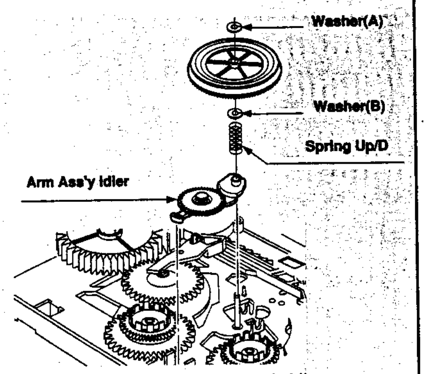

Washer(A)
Washer(B)
Spring Up/D
Arm Ass'y Idler

Fig. B-12 Arm Assembly Idler

13. Mode S/W (Fig. B-13)

1) Lift up the Lever H1.
2) Remove the screw(A) and lift up the Mode S/W.

NOTE

① When assembling mode, the groove of Gear (∩) and Body (o) of the Mode Switch should be aligned.

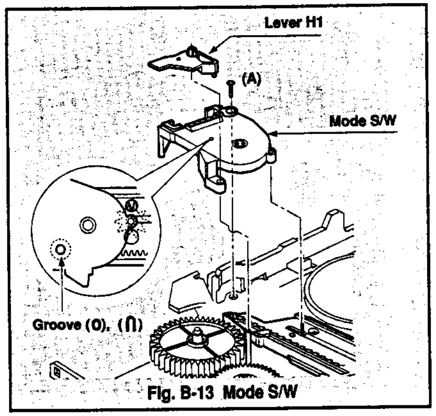


Fig. B-13 Mode S/W

14. Capstan Motor Assembly (Fig. B-14)

1) Remove three Screws(A) on the top side and remove the Capstan Motor Assembly.

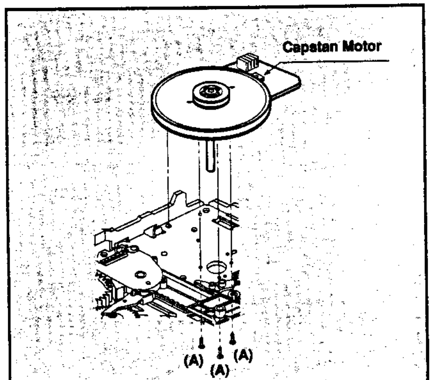


Fig. B-14 Capstan Motor Assembly

15. CAM Bracket Assembly (Fig. B-15)

1) Remove three screws(A).
2) Remove the CAM Bracket Assembly.

NOTE

① The (Tension Shaft Holder) fixes the Tension Shaft on Fig B-7. therefore when the CAM Bracket Assembly is removed, First remove the Tension Arm on Fig B-7.

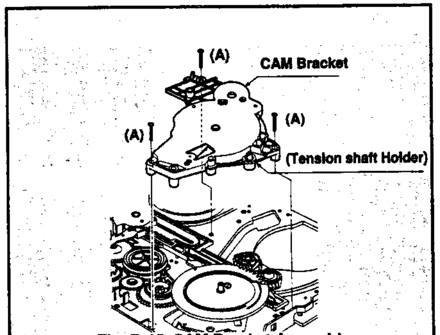


Fig. B-15 CAM Bracket Assembly

16. Cam Bracket/Lever Jog/Gear Jog (Fig. B-16) (Optional Item)

1) Remove the Cam Bracket Assembly.
2) Remove the Spring Jog.
3) Push the tab(A) and remove the Lever Jog.
4) Push the tab(B) and remove the Gear Jog.

NOTE

① The tab(B) on the Gear Jog should be in groove of the Lever Jog.

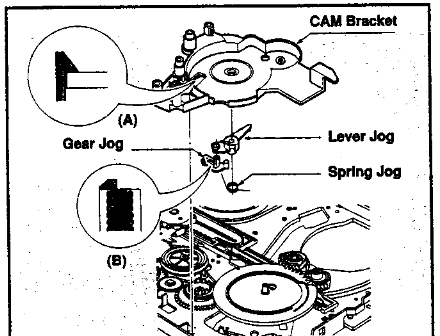


Fig. B-16 Cam Bracket/Lever Jog/Gear Jog

17. Gear Cam L/D (Fig. B-17)

1) Remove the Cam Bracket Assembly.
2) Remove the Gear Cam L/D.

NOTE

1) When assembling the Gear Cam L/D, the groove (/\/\) of Plate Slider should coincide with to the groove (V) on the Gear Cam L/D.

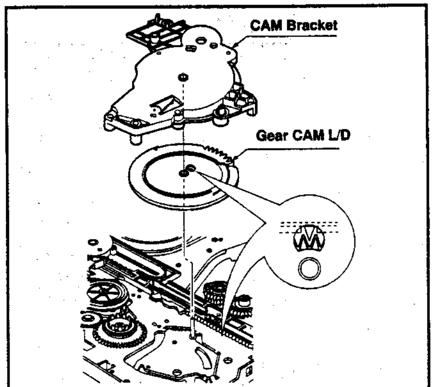


Fig. B-17 Gear Cam L/D

18. Gear PS/Plate Slider (Fig. B-18)

1) Remove two washers(C).
2) Remove the Plate Slider.
3) Remove the Gear PS.

NOTE

1) When the hole(A) of the Gear PS is aligned to the hole(B) of the chassis, the groove(V) of the Plate Slider should be aligned to the groove(/\/\) of the Gear PS.

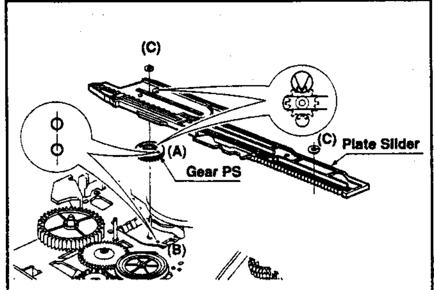


Fig. B-18 Gear PS/Plate Slider

19. Gear Assembly P2/P3 (Fig. B-19)

1) Remove the Plate Slider.
2) Remove by pushing one hook(B) on the top side of Gear Assembly P3.
3) Remove by pushing one hook(A) on the top side of Gear Assembly P2.

NOTES:

When disassembling and reassembling:

① The P2 and P3 Gear Assembly should not be interchanged.
② The groove(V), of Gear P2 should be aligned to the groove(/\/\ ) of Gear P3.
③ Set the hole of Lever to the Boss of P2 and P3 Base Assembly.
(When assembling make sure that the Lever is not bent.)

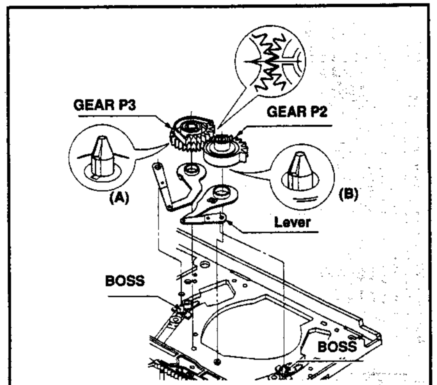


Fig. B-19 Gear Assembly P2/P3

20. Base Assembly P2/P3 (Fig. B-20)

1) Remove the P2/P3 Gear Assembly.
2) Remove the P2/P3 Base Assembly.

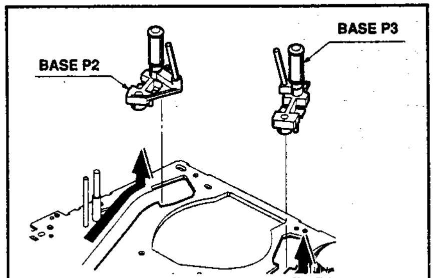


Fig. B-20 Base Assembly P2/P3

21. Guide Roller Assembly (Fig. B-21)

1) Remove two screws(A).
2) Remove the Guide Roller From the Base P2/P3 by turning it.

NOTE

When disassembling and reassembling:
① The P2 and P3 Base should not be interchanged.

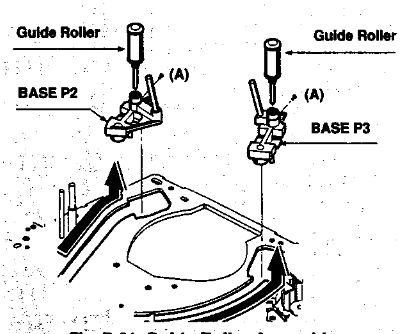

Guide Roller
Guide Roller
(A)
BASE P2
(A)
BASE P3

Fig. B-21 Guide Roller Assembly

22. Clutch Assembly S27 (Fig. B-22)

1) Remove the Gear Cam L/D and the Arm Assembly Idler.
2) Remove the washer(A).
3) Remove the Clutch Assembly S27.

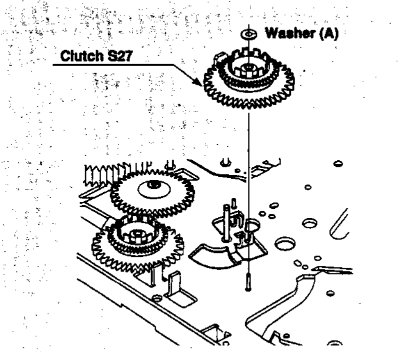

Washer (A)
Clutch S27

Fig. B-22 Clutch Assembly S27

23. Clutch Assembly T27 (Fig. B-23)

1) Remove the Gear H1 and Arm Assembly Idler.
2) Remove the washer(A).
3) Remove the Clutch Assembly T27.

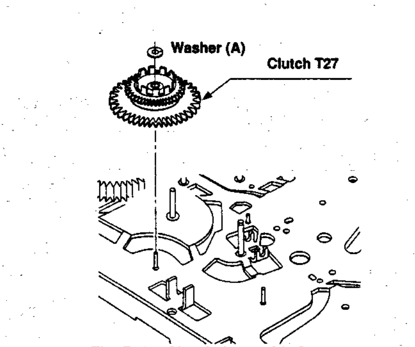

Washer (A)
Clutch T27

Fig. B-23 Clutch Assembly T27

24. Lever F/R & Arm F/R (Fig. B-24)

1) Remove the Plate Slider.
2) Remove the washer(A).
3) Remove the Lever F/R.
4) Remove the Arm Assembly Idler.
5) Remove the Arm F/R.

NOTE

1) When disassembling the Arm F/R should be horizontal.

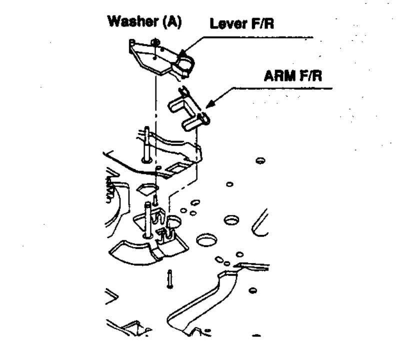

Washer (A)
Lever F/R
ARM F/R

Fig. B-24 Lever F/R & Arm F/R

25. Holder Pinch Assembly (Fig. B-25)

1) Separate the Holder Pinch Assembly by pushing tab(A) on the L/D Motor Bracket in the direction of arrow (B).

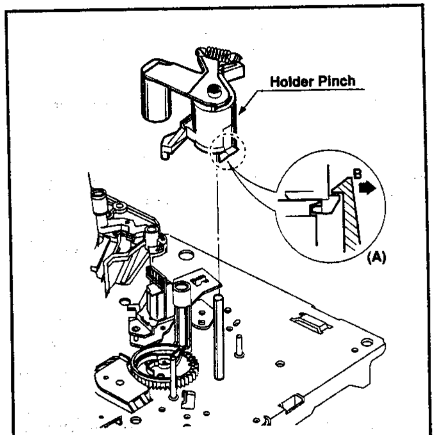

Holder Pinch
B
(A)

Fig. B-25 Holder Pinch Assembly

26. Pinch Arm Assembly (Fig. B-26)

1) Remove the Spring Pinch.
2) Remove the Pinch Arm Assembly by turning it counterclockwise.

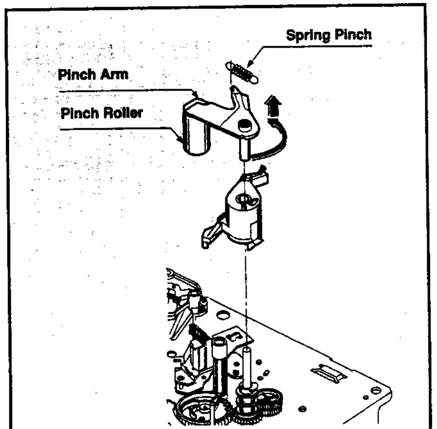

Spring Pinch
Pinch Arm
Pinch Roller

Fig. B-26 Pinch Arm Assembly

27. L/D Motor Bracket Assembly (Fig. B-27)

1) Remove three Screws(A).
2) Push the tabs(A) and remove the L/D Motor Bracket Assembly.

NOTES:

When assembling and disassembling:
① Make sure Grease from the Gear Pinch does not come in contact with the wing of the L/D Motor Bracket.

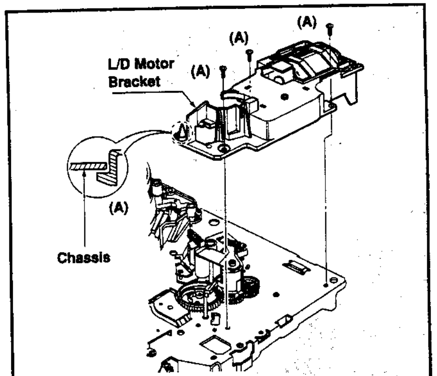

(A)
(A)
L/D Motor Bracket
(A)
(A)
Chassis

Fig. B-27 L/D Motor Bracket Assembly

28. Worm Wheel (Fig. B-28)

1) Remove the L/D Motor Bracket Assembly.
2) Push two Tabs(A) on the L/D Motor Bracket and then remove it.

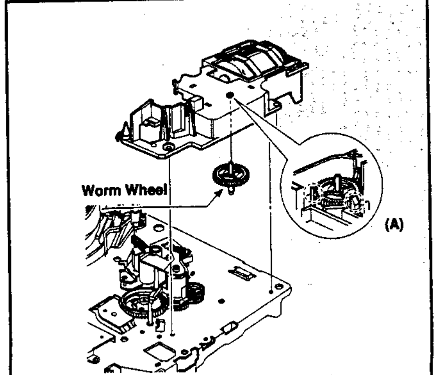

Worm Wheel
(A)

Fig. B-28 Worm Wheel

29. L/D Motor Assembly & Worm L/D Motor & L/D Motor Bracket (Fig. B-29)

1) Remove the L/D Motor Bracket Assembly.
2) Push the L/D Motor Assembly in lower direction and then remove.
3) Remove the Worm L/D Motor from the L/D Motor Assembly in the direction of arrow (A).
4) Remove the L/D Motor Assembly and the Worm L/D Motor and then L/D Motor Bracket is removed.

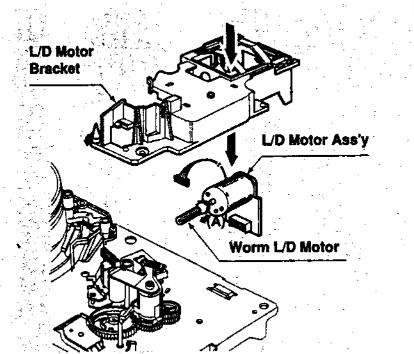


Fig. B-29 L/D Motor Assembly/ Worm L/D Motor/ L/D Motor Bracket

30. Gear CNT (Fig. B-30)

1) Remove the L/D Motor Bracket Assembly.
2) Remove the Pinch Arm Assembly.
3) Remove the Gear CNT.

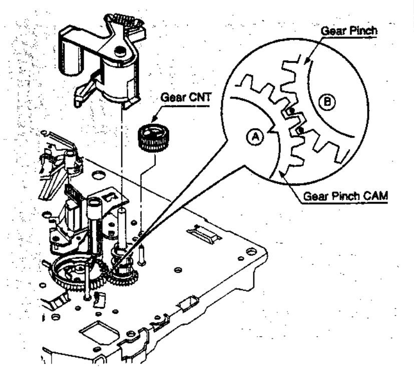


Fig. B-30 Gear CNT

31. Gear Pinch (Fig. B-31)

1) Remove the Pinch Arm Assembly.
2) Remove the Gear CNT.
3) Remove the Gear Pinch.
4) When reassembling, make sure that the two teeth, Gear pinch CAM(Ⓐ) and Gear pinch(Ⓑ), with timing marks line up with the arrow at two o'clock on the Pinch Cam Gear. (See Fig on B-30)

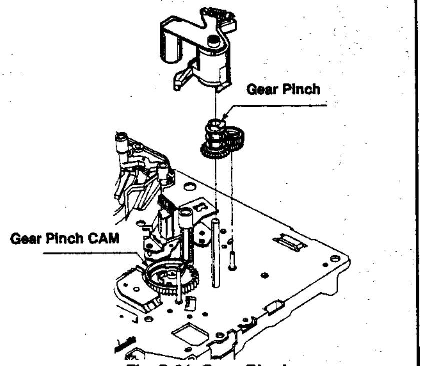


Fig. B-31 Gear Pinch

32. T/Up Arm Assembly (Fig. B-32)

1) Remove the L/D Motor Bracket Assembly.
2) Turn over the T/Up spring and separate the T/Up Arm Assembly.
3) Remove the spring.

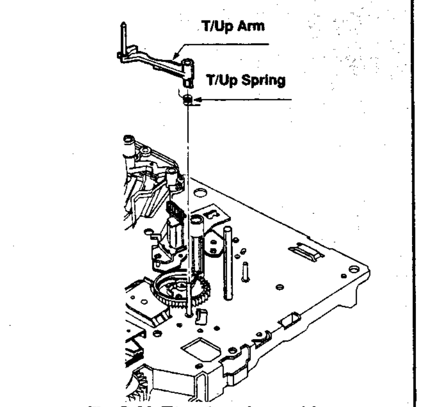


Fig. B-32 T/up Arm Assembly

33. Gear Pinch Cam (Fig. B-33)

1) Remove the T/Up Arm Assembly.
2) Remove by pushing one tab(A) on the bottom side of the Gear Pinch Cam.

NOTE

When disassembling and reassembling:

① The small hole on the Gear Pinch Cam and hole of chassis should be aligned.

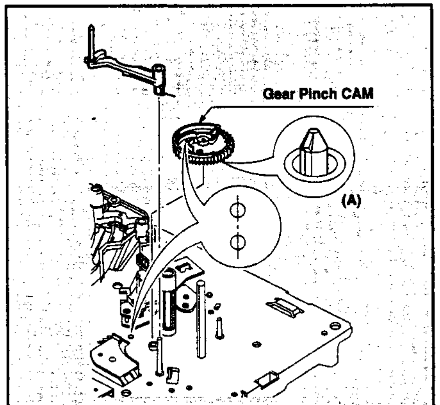
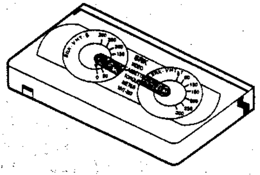
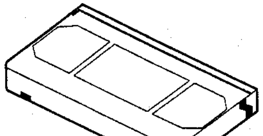
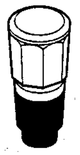
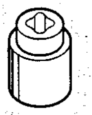
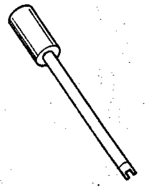
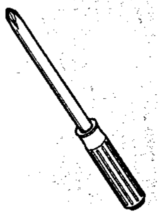


Fig. B-33 Gear Pinch Cam

MECHANISM ADJUSTMENT

● Tools and Fixtures for Deck

1. Cassette Torque meter **Parts No: D00-D006** 	**2. Alignment tape** **Parts No NTSC: DTN-0001** **PAL: DTN-0002** 	**3. Torque gauge** **Parts No: D00-D002** 
4. Torque gauge adaptor **Parts No: D09-R001** 	**5. Post height adjusting driver** **Parts No: DTL-0005** 	**6. + Type driver (ø5)** **Obtain locally** 

MECHANISM ADJUSTMENT

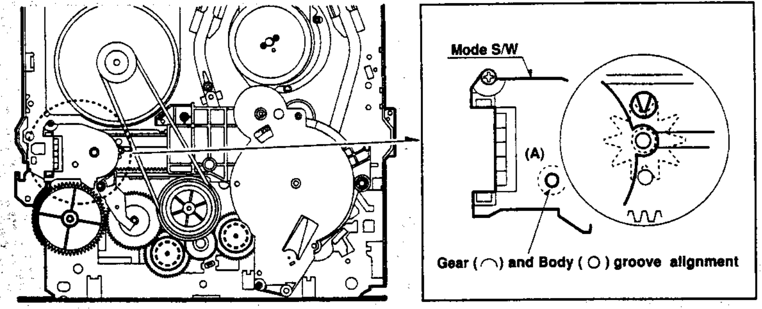
1. Mechanism and Mode Switch Alignment Check

Purpose: To determine if the mode switch and mechanism are in the correct position, when a tape is ejected from the loading mechanism.

Test Equipment / Fixture	Test Conditions VCR (VCP) State	Check Point
• Blank tape	• Eject Mode (with cassette ejected)	• Mechanism and Mode Switch Position

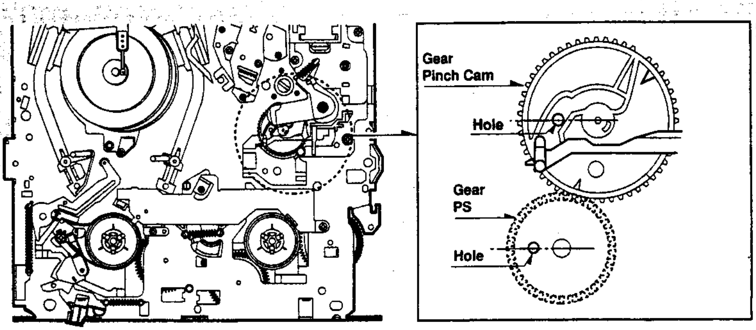
1) Turn power on and eject the cassette by pressing the eject button.
2) Remove the top and bottom covers.
3) Visually check the alignment of the Pinch Cam gear and PS gear holes, line up with holes in the chassis (figure C-2).
4) If the gears in step 3 do not align as indicated, then rotate the shaft of the loading motor to either the clockwise or counterclockwise direction until alignment does occur.
5) Turn the unit over and remove the main P.C.B thus exposing the bottom side of the deck mechanism.
6) Check the alignment of the mode switch as illustrated in figure C-1, (A).
7) If the alignment is incorrect then remove the mode switch and align as shown in figure C-1 with out changing the position of the Pinch Cam gear and PS gear.
8) Remount the mode switch and main P.C.B assembly and check operation.

CHECK DIAGRAM



BOTTOM VIEW

Fig. C-1



TOP VIEW

Fig. C-2

2. Preparation for Adjustment (To set VCR (VCP) to the loading state without inserting a cassette.)

1) Unplug the Power Cord from the AC outlet.
2) Separate the Top Cover and Front Loading Mechanism.
3) Plug the Power Cord into the AC outlet.
4) Turn the VCR on and push the tact switch in the P.C.B. Assembly.
   The VCR can accept inputs for each mode in this case. However the rewind and review operation cannot be performed for more than a few seconds because the take-up reel table is in the stop state and reel pulses cannot be detected.

NOTE

Cover the holes in the end sensors with black tape to prevent a light leak.

NOTES:

Always return the VCR(VCP) to the Front Loading Mechanism Assembly State in the following order after the above operations have been performed.

1) Press the Eject button after turning the power ON.
2) Wait for about 10 seconds until searching out the assembly position.
3) Assemble the Front Loading Mechanism and connect the Front Loading Mechanism Connector.
4) Refer to the "Front Loading Mechanism Disassembly" Section.

3. Tension Post Position and Tension Adjustment

Purpose: To insure uniform tape contact with the video head by maintaining constant tape tension.

Test Equipment / Fixture	Test Conditions VCR(VCP) State	Adjustment Point
• Cassette Torque Meter (For play 100g/cm)	• Position Adjustment: Play without a cassette • Tension Check: Play	• Holder Band B and C

Position Adjustment

1) Remove cassette.
2) Adjust the position of tension post in accordance with figure C-3.

NOTE

Align the Tension Post (2mm) to the hole in the Chassis (2.5mm).

Tension Adjustment

1) Turn on VCR and load the cassette torque meter.
2) Press the play button and observe the torque tension on the supply reel (spec. 37g/cm+5g/cm).
3) If torque is out of spec. then use a Phillips screw driver and move the screw head located in the center of the B and C band hold; to either the right or left until correct torque is indicated.

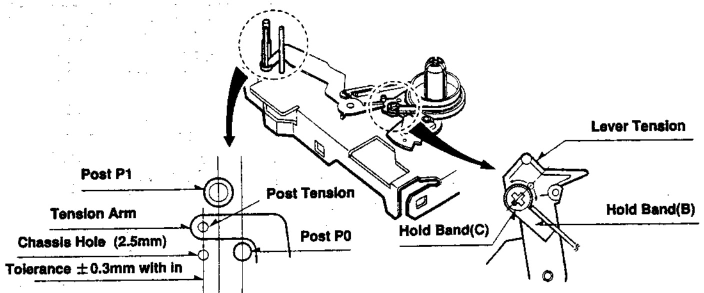


Fig. C-3

4. Checking Torque

Purpose: To insure smooth transport of the tape during each mode of operation. If tape transport is abnormal, then check the torque as indicated by the chart below.

Test Equipment / Fixture	Test Conditions VCR(VCP) State
• Torque Gauge(600 g/cm ATG) • Torque Gauge Adaptor • Cassette Torque Meter V┌NTSC: 16.67msec └PAL: 20msec	• Set the VCR to each operating mode without inserting a cassette. (See '2. Preparation for Adjustment'. Page 4-17)

Item	Mode	Test Equipment	Measurement Reel	Measurement Values
Slack Removal Torque	Unloading	Cassette Torque Meter	Supply Reel	More than 150~270g·cm
Fast Forward Torque	Fast Forward	Cassette Torque Gauge	Take-Up Reel	More than 500g·cm
Rewind Torque	Rewind	Cassette Torque Gauge	Supply Reel	More than 500g·cm
Play Take-Up Torque	Play	Cassette Torque Meter	Take-Up Reel	55~95g·cm
Review Torque	Review	Cassette Torque Meter	Supply Reel	170~250g·cm

Checking Method:
The Values are measured by using a torque gauge and torque gauge adaptor with the torque gauge affixed.

NOTE

The torque reading to measure occurs when the tape abruptly changes direction from fast forward or rewind mode, when quick braking is applied to both reels.

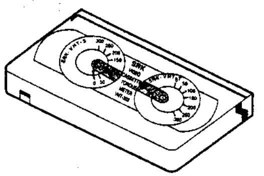


Fig. C-5

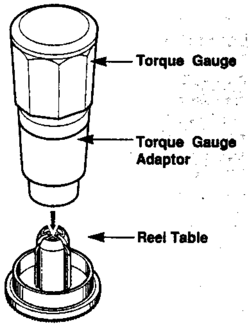


Fig. C-4

5. Guide Roller Height Adjustment

Purpose: **To regulate the height of the tape so that the bottom of the tape runs along the tape guide line on the lower drum.**

A. Preliminary Adjustment

Test Equipment / Fixture	Test Conditions VCR(VCP) State	Adjustment Point
• Post Height Adjusting Driver • Hexagonal Wrench or Allen Wrench Phillips screw driver	• Allows a good tape to play normally in spite of a damaged guide roller.	• Guide Roller Height Adjustment screws on the Supply and Take-Up Guide Rollers.

Adjustment Procedure

1) Perform the precise adjustment(See below B).
2) If the Guide Roller is damaged, loosen the Guide Roller retaining screw and replace the Guide Roller.
3) Adjust the height of P2, P3 so that TAPE is adjacent to the guide line.

ADJUSTMENT DIAGRAM

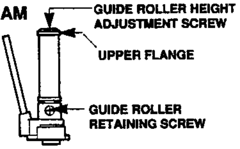

GUIDE ROLLER HEIGHT ADJUSTMENT SCREW
UPPER FLANGE
GUIDE ROLLER RETAINING SCREW

Fig. C-5-1

B. Precise Adjustment

Test Equipment / Fixture	Test Equipment Connection Points	Test Conditions VCR(VCP) State	Adjustment Point
• Oscilloscope • Alignment Tape • Post Height Adjusting Driver	• CH-1: PB RF Envelope • CH-2: NTSC: SW 30Hz PAL : SW 25Hz • Head Switching Output Point • RF Envelope Output Point	• Play an alignment tape	• Guide Roller Height Adjustment Screws.

Adjustment Procedure

1) Play an alignment tape after connecting the probe of the oscilloscope to the RF Envelope Output Test Point and Head Switching Output Test Point.
2) Tracking Control (in PB mode): Center position (When this adjustment is performed after the drum assembly has been replaced, set the tracking control so that the RF output is maximum.)
3) Height adjustment screw: Flatten the RF waveform. (Fig. C-5-2)
4) Turn (Move) the tracking control (in the Playback mode) clockwise and counterclockwise. (Fig. C-5-3))
5) Check that any drop of RF output is uniform at the start and end of the waveform.

CAUTION

If the adjustment is excessive or insufficient the tape will jam or fold.

Waveform Diagrams

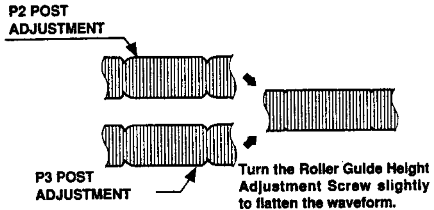

P2 POST ADJUSTMENT
P3 POST ADJUSTMENT
Turn the Roller Guide Height Adjustment Screw slightly to flatten the waveform.

Fig. C-5-2

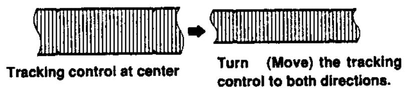
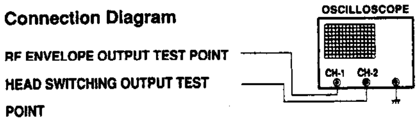

Tracking control at center
Turn (Move) the tracking control to both directions.

Fig. C-5-3

Connection Diagram


OSCILLOSCOPE
CH-1
CH-2
RF ENVELOPE OUTPUT TEST POINT
HEAD SWITCHING OUTPUT TEST POINT

---

6. Audio/Control (A/C) Head Adjustment

Purpose: **To insure that the tape passes accurately over the audio and control tracks in exact alignment in both the record and playback modes.**

A. Preliminary Adjustment (Height and tilt adjustment)

Perform the Preliminary adjustment, when there is no Audio Output signal with a blank tape.

Test Equipment / Fixture	Test Conditions VCR(VCP) State	Adjustment Points
• Blank Tape • Screw Driver(+) Type 5mm	• Play the blank tape (CTL Tape)	• Tilt Adjustment Screw(C) • Height Adjustment Screw(B) • Azimuth Adjustment Screw(A)

Adjustment Procedure /Diagrams

1) Initially adjust the A/C head assembly as shown in figure C-6-1, by using the height adjustment screw(B).
2) Play a blank tape and observe if the tape passes accurately over the A/C head without tape curling or folding.
3) If folding or curling does occur then adjust the Tilt adjusting screw(C) while the tape is running to resemble figure C-6-3.
4) Confirm that the tape passes over the A/C head assembly as indicated by proper audio reproduction and proper tape counter performance.

NOTE

Ideal A/C head height occurs, when the tape runs between 0.2~0.25mm above the bottom edge of the A/C head core.

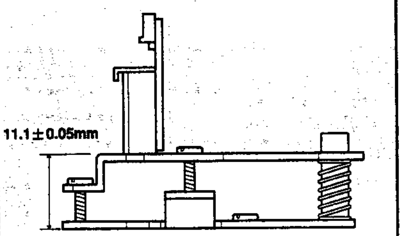


Fig. C-6-1 A/C Head Base

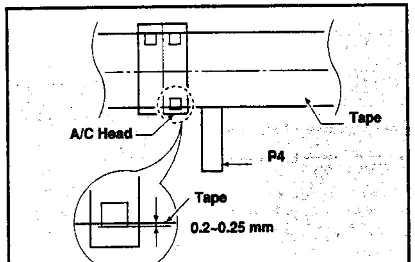

A/C Head
Tape
P4
Tape
0.2~0.25 mm

Fig. C-6-3

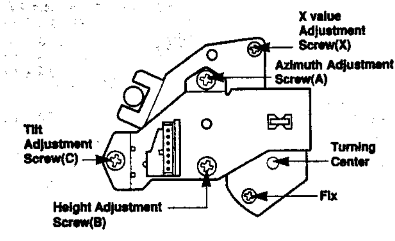

X value Adjustment Screw(X)
Azimuth Adjustment Screw(A)
Tilt Adjustment Screw(C)
Turning Center
Fix
Height Adjustment Screw(B)

Fig. C-6-2 A/C Head Assembly

B. Confirm that the tape passes smoothly between the T/UP guide and the Pinch Roller (Using a mirror or the naked eye).

1) After completing step A. (Preliminary Adjustment), check that the tape passes around the T/UP post without folding at the top or bottom.
   If folding is observed, due the following:
   ① If folding is observed at the lower part of the T/UP post, then slowly turn the tilt adjustment in the clockwise direction to eliminate tape the curling.
   ② If folding is observed at the upper part of the T/UP post, then slowly turn the tilt adjustment in the counterclockwise direction to eliminate the tape curling.

C. RF Fine Adjustment (only if the RF waveform differs from figure C-5-3).

1) Check the RF Envelope after confirming smooth tape transport path at the T/UP Guide/Pinch Roller.

D. Precise Adjustment (Azimuth adjustment)

Test Equipment / Fixture	Test Equipment Connection Point	Test Conditions VCR (VCP) State	Adjustment Points
• Oscilloscope • Alignment tapes • Screw Driver(+) Type 5mm	• Audio output jack	• Play an alignment tape 1KHz, 7KHz sections.	• Azimuth Adjustment Screw(A) • Tilt Adjustment Screw(C)

Adjustment Procedure

1) Connect the probe of oscilloscope to Audio Output Jack.
2) Alternately adjust the Azimuth adjustment screw(A) and the Tilt adjustment screw(C) for maximum output of the 1KHz and 7KHz segments, while maintaining the flattest envelope differential between the two frequencies.

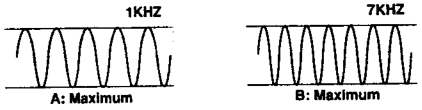
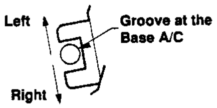


Fig. C-6-4

7. X-Value Adjustment

Purpose: To obtain compatibility with other VCR(VCP).

Test Equipment / Fixture	Test Equipment Connection Point	Test Conditions VCR (VCP) State	Adjustment diagrams
• Oscilloscope • Alignment tapes • Screw Driver(+) Type 5mm • Post Height Adjusting Driver	• CH-1: PB RF Envelope • CH-2: NTSC: SW 30Hz PAL : SW 25Hz • Head Switching Output Test Point • RF Envelope Output Test Point	• Play an alignment tape	

Adjustment Procedure

1) Loosen the fixed mounting and X Value adjustment screw.
2) Allow the mechanism to run long enough for auto tracking to complete it's cycle.
3) Move the A/C base laterally in the direction as shown in the diagram to find the center of the peak that allows for the maximum waveform envelope. This method should allow the 30um head to be centrally located over the 60um tape track.
4) Tighten the A/C head assembly mounting screws.

Adjustment Diagram

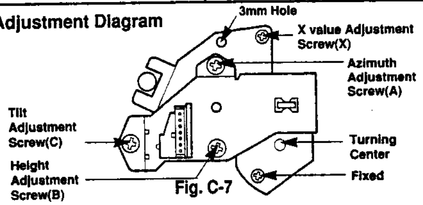
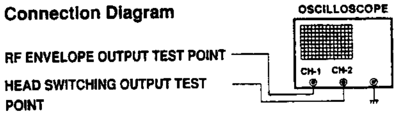

3mm Hole
X value Adjustment Screw(X)
Azimuth Adjustment Screw(A)
Tilt Adjustment Screw(C)
Turning Center
Height Adjustment Screw(B)
Fixed

Fig. C-7

Connection Diagram


OSCILLOSCOPE
RF ENVELOPE OUTPUT TEST POINT
HEAD SWITCHING OUTPUT TEST POINT
CH-1
CH-2

8. Adjustment after Replacing Drum Assembly (Video Heads)

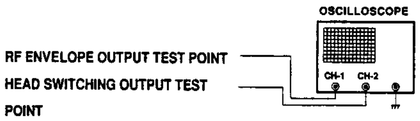
Purpose: To correct for shift in the roller guide and X value after replacing the drum.

Test Equipment / Fixture	Test Equipment Connection Points	Test Conditions VCR(VCP) State	Adjustment Points
• Oscilloscope • Alignment tape • Blank Tape • Post Height Adjusting Driver • Screw Driver(+) Type 5mm	• CH-1: PB RF Envelope • CH-2: NTSC: SW 30Hz PAL : SW 25Hz • Head Switching Output Test Point • RF Envelope Output Test Point	• Play the blank tape • Play an alignment tape	• Guide Roller Precise Adjustment • Switching Point • Tracking Preset • X-Value

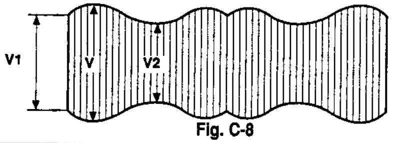
Checking/Adjustment Procedure

Play a blank tape and check for tape curling or creasing around the roller guide. If there is a problem then follow the procedure 5. "Guide Roller Height" and 6. "Audio Control(A/C) Head Adjustment".

Connection Diagram


OSCILLOSCOPE
RF ENVELOPE OUTPUT TEST POINT
HEAD SWITCHING OUTPUT TEST POINT
CH-1
CH-2

Waveform



V1/V MAX ≥ 0.7
V2/V MAX ≥ 0.8
RF ENVELOPE OUTPUT POINT

Fig. C-8

9. Check the Tape Travel after Reassembling Deck Assembly.

9-1. Check Audio and RF Locking Time during playback and after CUE or REV (FF/REW)

Test Equipment / Fixture	Specification	Test Equipment Connection Points	Test Conditions VCR(VCP) State
• Oscilloscope • Alignment tape (with 6H 3kHz Color Bar Signal) • Stop Watch	• RF Locking Time: Less than 5 sec. • Audio Locking Time: Less than 10 sec.	• CH-1: PB RF Envelope • CH-2: Audio Output • RF Envelope Output Point • Audio Output Jack	• Play an alignment tape (with 6H 3kHz Color Bar Signal)

Checking Procedure

Play an alignment tape then change the operating mode to CUE or REV and confirm if the unit meets the above listed specifications.

NOTES:

1) CUE is fast forward mode (FF)
2) REV is the rewind mode (REW)
3) Referenced to the Play mode

9-2. Check the condition between the Audio and Video Sync. (Lip Sync.)

Test Equipment / Fixture	Specification	Test Equipment Connection Points	Test Conditions VCR(VCP) State
• Oscilloscope • Alignment Tape	• Less than $\pm\frac{1}{2}$V	• CH-1: PB RF Envelope • CH-2: Audio Output • RF Envelope Output Point • Audio Output Jack	• Play an alignment tape

Checking Procedure

1) Confirm that the period Ⓐ in Fig. C-9-1 is within $\pm\frac{1}{2}$V.
2) If the result is abnormal, repeat adjustment #7. (X-Value adjustment)

V ┌ NTSC: 16.67msec
  └ PAL: 20msec

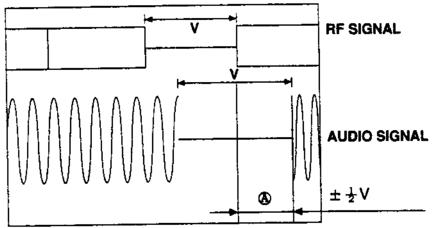


Fig. C-9-1

9-3. Check for tape curling or jamming

Test Equipment / Fixture	Specification	VCR(VCP) State
• T-160 Tape • T-120 Tape	• Be sure there is no tape jamming or curling at the begining, middle or end of a T-160 tape.	• Run the CUE, REV play mode at the beginning and the end of the tape.

Checking Procedure

1) Confirm that the tape runs smoothly around the roller guides, drum and A/C head assemblies while abruptly changing operating modes from Play to CUE or REV. This is to be checked at the begining, middle and end sections of the cassette.
2) Confirm that the tape passes over the A/C head assembly as indicated by proper audio reproduction and proper tape counter performance.

10. Maintenance/Inspection Procedure

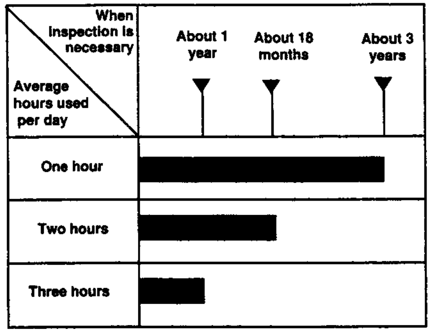
1) Required Maintenance

The recording density of a VCR(VCP) is much higher than that of an audio tape recorder. VCR(VCP) components must be very precise, at tolerances of 1/1000mm, to ensure compatiblity with other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure a good picture, periodic inspection and maintenance, including replacement of worn out parts and lubrication, is necessary.

2) Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR(VCP), and the environment in which the VCR(VCP) is used.
But, in general home use, a good picture will be maintained if inspection and maintenance is made every 1,000 hours. The table below shows the relation between time used and inspection period.

Table 1



3) Check before starting repairs

The following faults can be remedied by cleaning and oiling. Check the needed lubrication and the conditions of cleanliness in the unit.
Check with the customer to find out how often the unit is used, and then determine that the unit is ready for inspection and maintenance. Check the following parts.

Tabel 2

Phenomenon	Inspection
Poor S/N, no color	Dirt on video head or worn video head
Tape does not run or tape is slack	Dirt on pinch roller, belt or flywheel belt
Vertical jitter, horizontal jitter	Dirt on video head or in tape transport system
Color beats	Dirt on full-erase head
Low volume or distorted audio	Dirt on audio/control head
No Fast forward or rewind or rotation is slow	Dirt on belt

4) Supplies Required for Inspection and Maintenance

(1) Grease Kanto G-311G or equivalent
(2) Isopropyl Alcohol or equivalent
(3) Cleaning Patches

5) Maintenance Procedure

5-1) Cleaning

(1) Cleaning video head
First use a cleaning tape. If the dirt on the head is too stubborn to remove by tape, use the cleaning patch. Coat the cleaning patch with Isopropyl Alcohol. Touch the cleaning patch to the head tip and gently turn the head(rotating cylinder) right and left.
(Do not move the cleaning patch vertically. Make sure that only the buckskin on the cleaning patch comes into contact with the head. Otherwise, the head may be damaged.)
Thoroughly dry the head. Then run the test tape. If Isopropyl Alcohol remains on the video head, the tape may be damaged when it comes into contact with the head surface.

(2) Clean the tape transport system and drive system, etc, by wiping with a cleaning patch wetted with Isoporopyl Alcohol.

NOTES:

① It is the tape transport system which comes into contact with the running tape. The drive system consists of those parts which moves the tape.
② Make sure that during cleaning you do not touch the tape transport system with the tip of a screw driver and no that force is that would cause deforming or damage applied to the system.

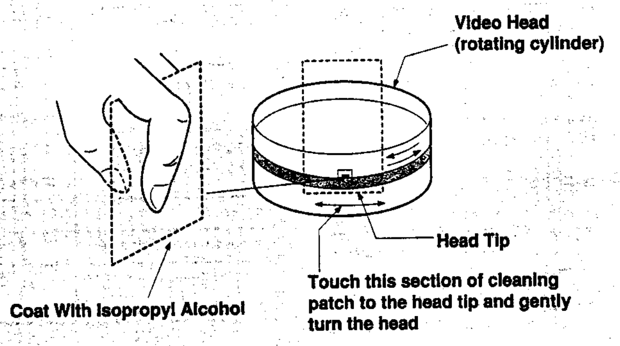

Video Head
(rotating cylinder)
Head Tip
Touch this section of cleaning patch to the head tip and gently turn the head
Coat With Isopropyl Alcohol

Fig. C-10-1

5-2) Greasing

(1) Greasing guidelines
Apply grease, with a cleaning patch. Do not use excess grease. It may come into contact with the tape transport or drive system. Wipe any excess and clean with cleaning patch wetted in Isopropyl Alcohol.

(2) Periodic greasing
Grease specified locations every 5,000 hours.

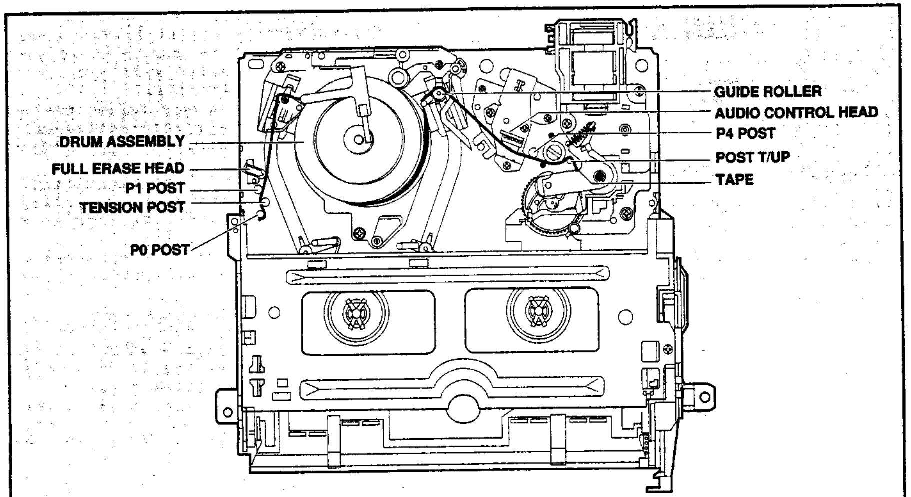

GUIDE ROLLER
AUDIO CONTROL HEAD
P4 POST
POST T/UP
TAPE
DRUM ASSEMBLY
FULL ERASE HEAD
P1 POST
TENSION POST
P0 POST

Fig. C-10-2 Tape Transport System

Phenomenon	Inspection	Replacement	
Color beats	Dirt on full-erase head	○	①
Poor S/N no color	Dirt on video head	○	②
Vertical jitter	Dirt on video head Dirt on tape transport system	○	③
Low volume Sound distorted	Dirt on audio/control head	○	④
Tape does not run. Tape is slack.	Dirt on pinch roller	○	⑤

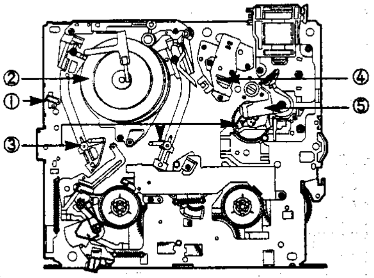


Fig. C-10-3 Top VIEW

Phenomenon	Inspection	Replacement	
• No fast forward or rewind, or rotation is slow • Tape does not run • Slack tape	Dirt on reel belt	○	⑥
In Review and Unloading (off mode), the Tape is rolled up loosely.	Clutch Ass'y S27 Torque reduced	○	⑦
	Cleaning Drum and transport system		

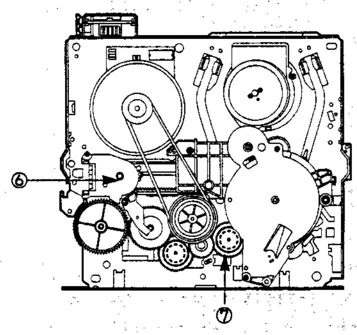


Fig. C-10-4 BOTTOM VIEW

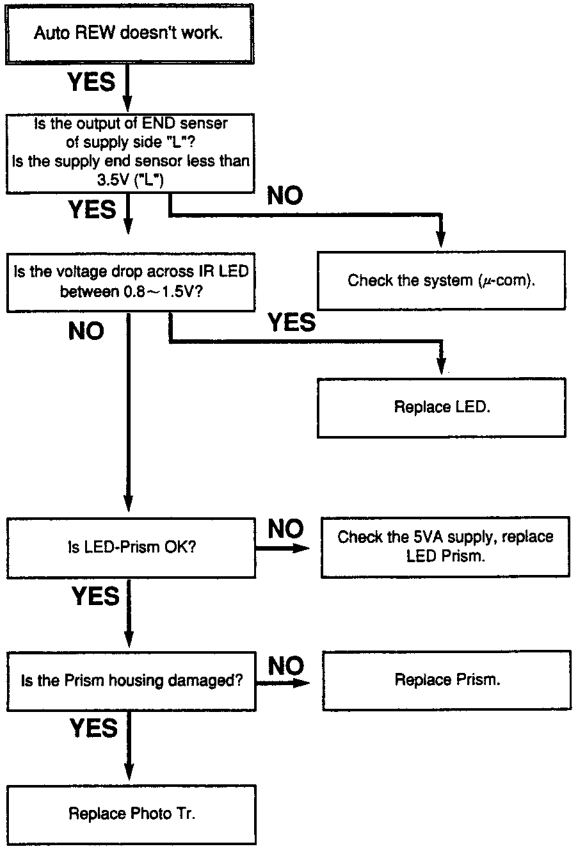
Note

If locations marked with ○ do not operate normally after cleaning, check for wear and replace.
See the EXPLODED VIEWS at the end of this manual as well as the above illustrations for the sections to be lubricated and greased.

MECHANISM TROUBLESHOOTING GUIDE

1.Deck Mechanism

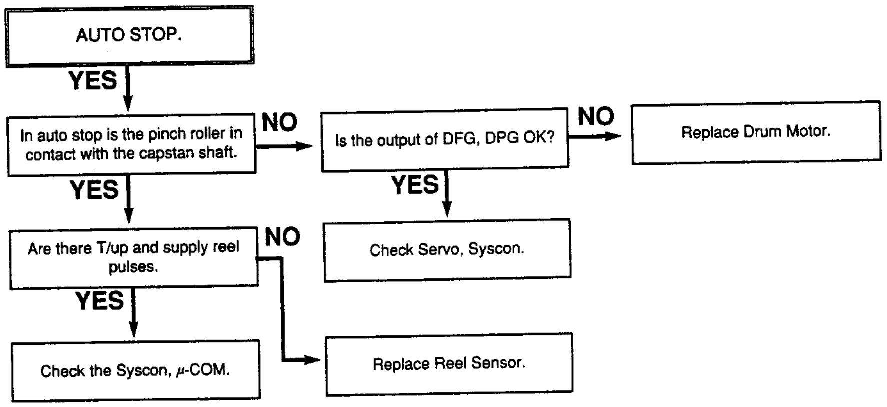
A.

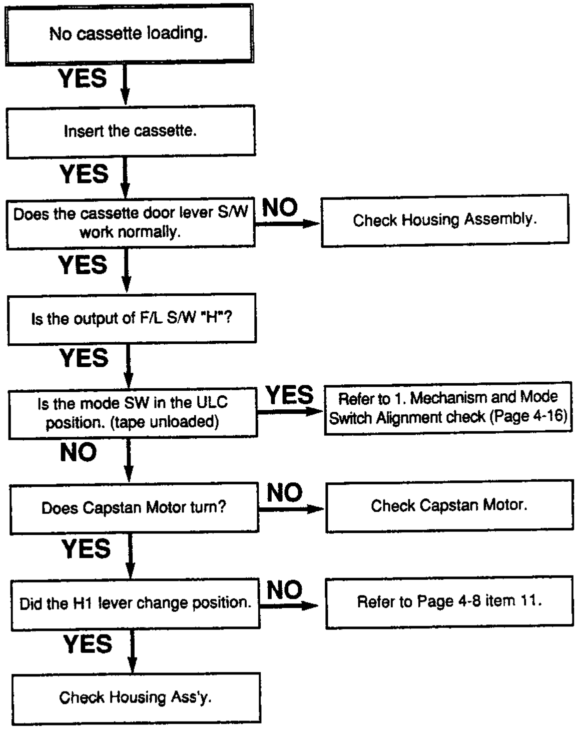

Auto REW doesn't work.
YES
Is the output of END senser of supply side "L"? Is the supply end sensor less than 3.5V ("L")
YES
NO
Check the system (μ-com).
Is the voltage drop across IR LED between 0.8~1.5V?
NO
YES
Replace LED.
Is LED-Prism OK?
NO
Check the 5VA supply, replace LED Prism.
YES
Is the Prism housing damaged?
NO
Replace Prism.
YES
Replace Photo Tr.

NOTES:

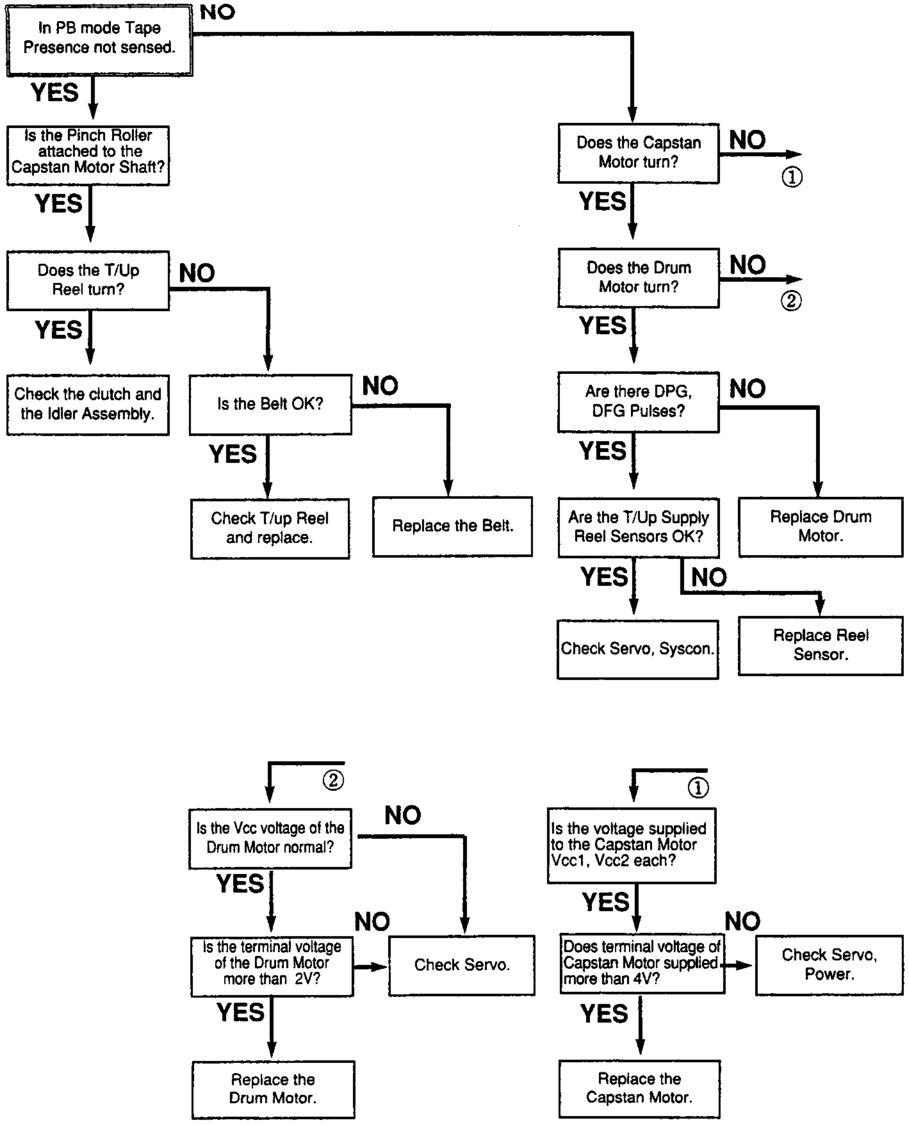
1) Auto REW takes place when the supply end sensor is "H" high.
2) "H"=voltage greater than 3.5V, "L"=voltage between 0.7~1.0V.

MECHANISM TROUBLESHOOTING GUIDE

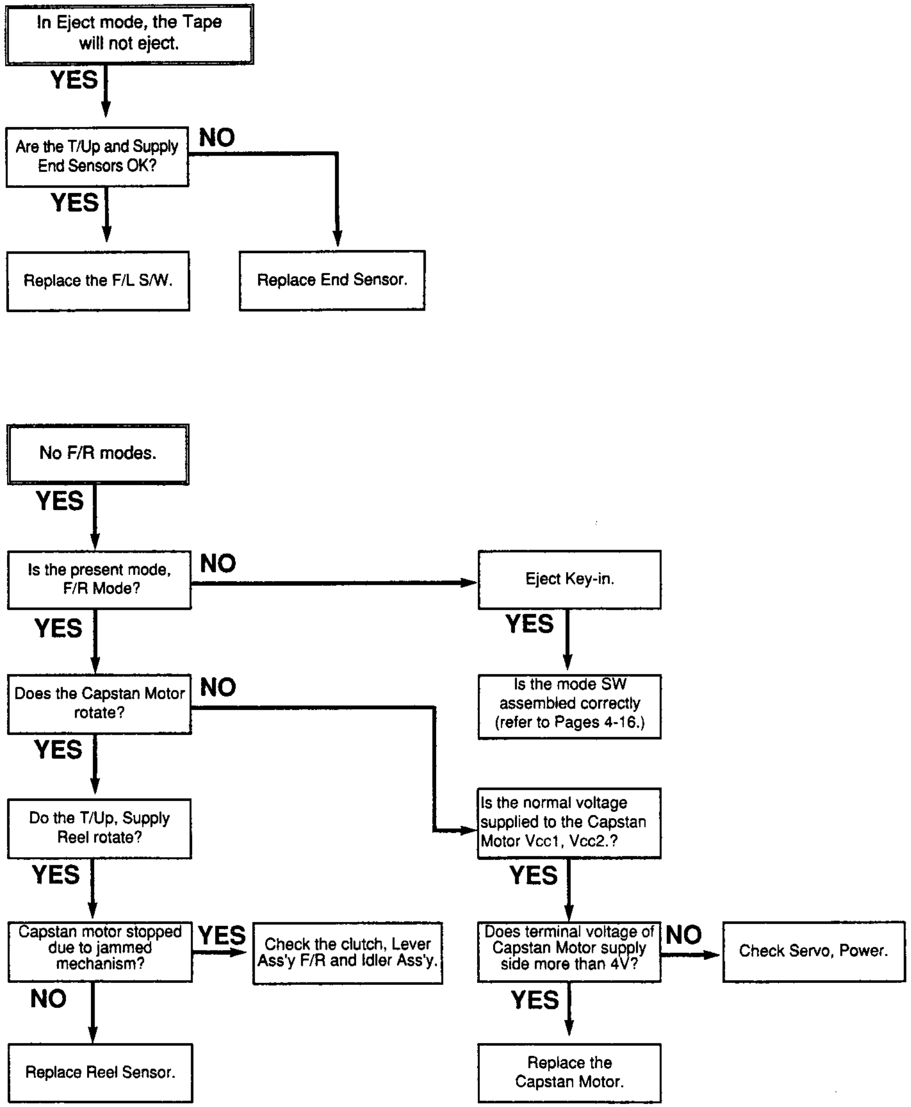

AUTO STOP.
YES
In auto stop is the pinch roller in contact with the capstan shaft.
NO
Is the output of DFG, DPG OK?
NO
Replace Drum Motor.
YES
Check Servo, Syscon.
YES
Are there T/up and supply reel pulses.
NO
Replace Reel Sensor.
YES
Check the Syscon, μ-COM.


No cassette loading.
YES
Insert the cassette.
YES
Does the cassette door lever S/W work normally.
NO
Check Housing Assembly.
YES
Is the output of F/L S/W "H"?
YES
Is the mode SW in the ULC position. (tape unloaded)
YES
Refer to 1. Mechanism and Mode Switch Alignment check (Page 4-16)
NO
Does Capstan Motor turn?
NO
Check Capstan Motor.
YES
Did the H1 lever change position.
NO
Refer to Page 4-8 item 11.
YES
Check Housing Ass'y.

D.


In PB mode Tape Presence not sensed.
NO
YES
Is the Pinch Roller attached to the Capstan Motor Shaft?
YES
Does the T/Up Reel turn?
NO
YES
Check the clutch and the Idler Assembly.
Is the Belt OK?
NO
YES
Check T/up Reel and replace.
Replace the Belt.
Does the Capstan Motor turn?
NO
①
YES
Does the Drum Motor turn?
NO
②
YES
Are there DPG, DFG Pulses?
NO
YES
Are the T/Up Supply Reel Sensors OK?
Replace Drum Motor.
YES
NO
Check Servo, Syscon.
Replace Reel Sensor.
②
Is the Vcc voltage of the Drum Motor normal?
NO
YES
Is the terminal voltage of the Drum Motor more than 2V?
NO
Check Servo.
YES
Replace the Drum Motor.
①
Is the voltage supplied to the Capstan Motor Vcc1, Vcc2 each?
YES
Does terminal voltage of Capstan Motor supplied more than 4V?
NO
Check Servo, Power.
YES
Replace the Capstan Motor.

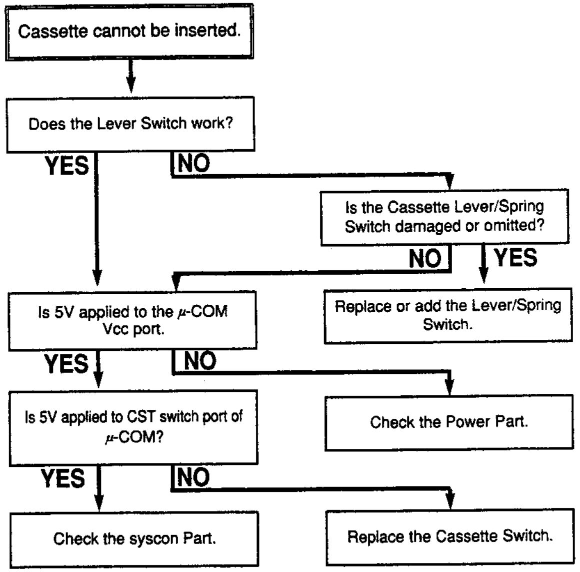
E.


In Eject mode, the Tape will not eject.
YES
Are the T/Up and Supply End Sensors OK?
NO
YES
Replace the F/L S/W.
Replace End Sensor.
No F/R modes.
YES
Is the present mode, F/R Mode?
NO
Eject Key-in.
YES
YES
Is the mode SW assembled correctly (refer to Pages 4-16.)
Does the Capstan Motor rotate?
NO
YES
Is the normal voltage supplied to the Capstan Motor Vcc1, Vcc2.?
Do the T/Up, Supply Reel rotate?
YES
YES
Capstan motor stopped due to jammed mechanism?
YES
Check the clutch, Lever Ass'y F/R and Idler Ass'y.
NO
Replace Reel Sensor.
Does terminal voltage of Capstan Motor supply side more than 4V?
NO
Check Servo, Power.
YES
Replace the Capstan Motor.

MECHANISM TROUBLESHOOTING GUIDE

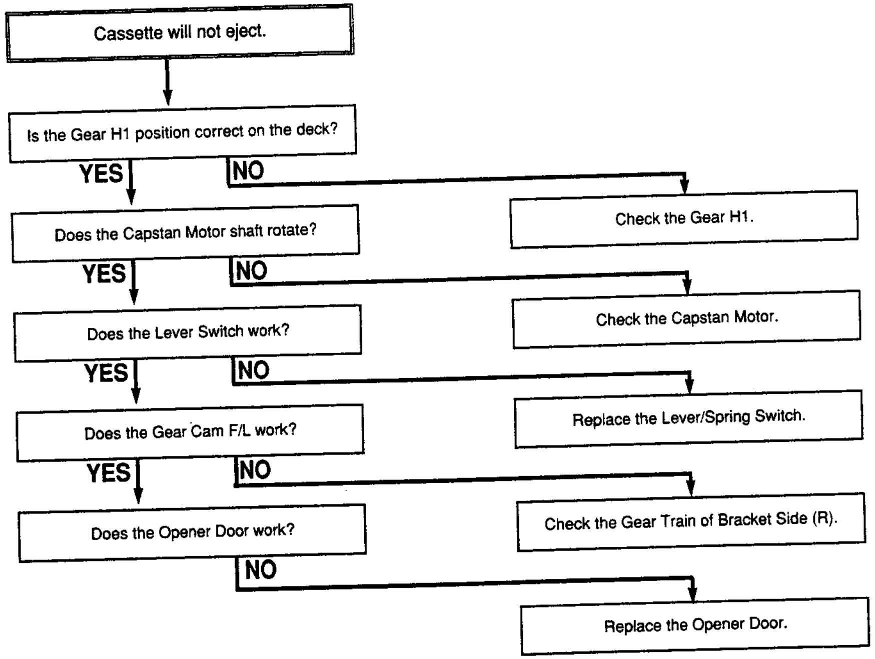
2. Front Loading Mechanism

A.


Cassette cannot be inserted.
Does the Lever Switch work?
YES
NO
Is the Cassette Lever/Spring Switch damaged or omitted?
NO
YES
Is 5V applied to the μ-COM Vcc port.
Replace or add the Lever/Spring Switch.
YES
NO
Is 5V applied to CST switch port of μ-COM?
Check the Power Part.
YES
NO
Check the syscon Part.
Replace the Cassette Switch.

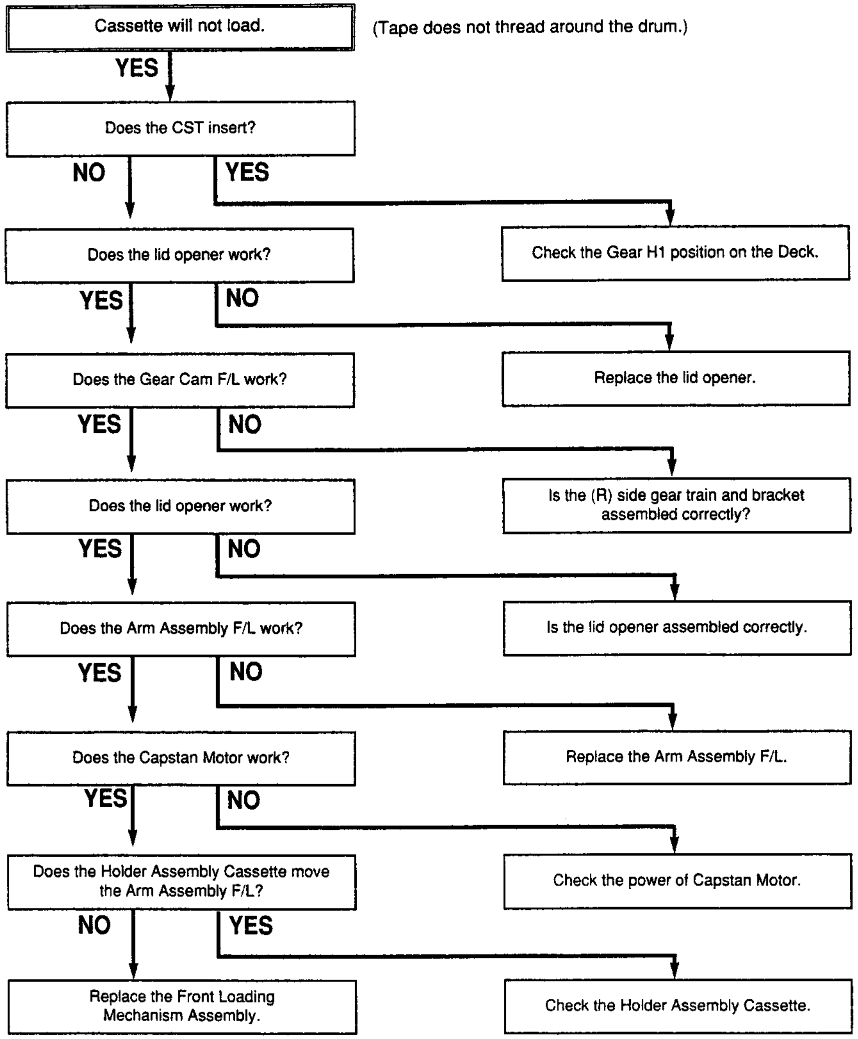
MECHANISM TROUBLESHOOTING GUIDE

C.


Cassette will not eject.
Is the Gear H1 position correct on the deck?
YES
NO
Does the Capstan Motor shaft rotate?
Check the Gear H1.
YES
NO
Does the Lever Switch work?
Check the Capstan Motor.
YES
NO
Does the Gear Cam F/L work?
Replace the Lever/Spring Switch.
YES
NO
Does the Opener Door work?
Check the Gear Train of Bracket Side (R).
NO
Replace the Opener Door.

MECHANISM TROUBLESHOOTING GUIDE

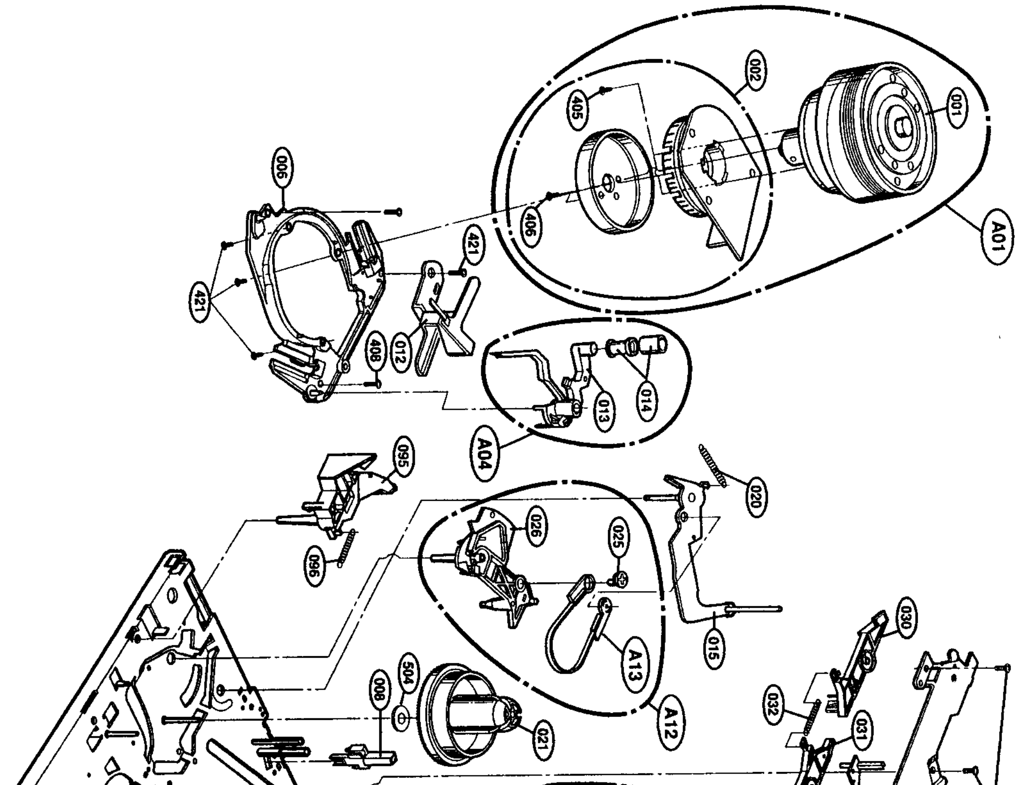
B.


Cassette will not load.
(Tape does not thread around the drum.)
YES
Does the CST insert?
NO
YES
Check the Gear H1 position on the Deck.
Does the lid opener work?
YES
NO
Replace the lid opener.
Does the Gear Cam F/L work?
YES
NO
Is the (R) side gear train and bracket assembled correctly?
Does the lid opener work?
YES
NO
Is the lid opener assembled correctly.
Does the Arm Assembly F/L work?
YES
NO
Replace the Arm Assembly F/L.
Does the Capstan Motor work?
YES
NO
Check the power of Capstan Motor.
Does the Holder Assembly Cassette move the Arm Assembly F/L?
NO
YES
Replace the Front Loading Mechanism Assembly.
Check the Holder Assembly Cassette.

EXPLODED VIEW

1. Moving Mechanism Section (1)

(Top View)

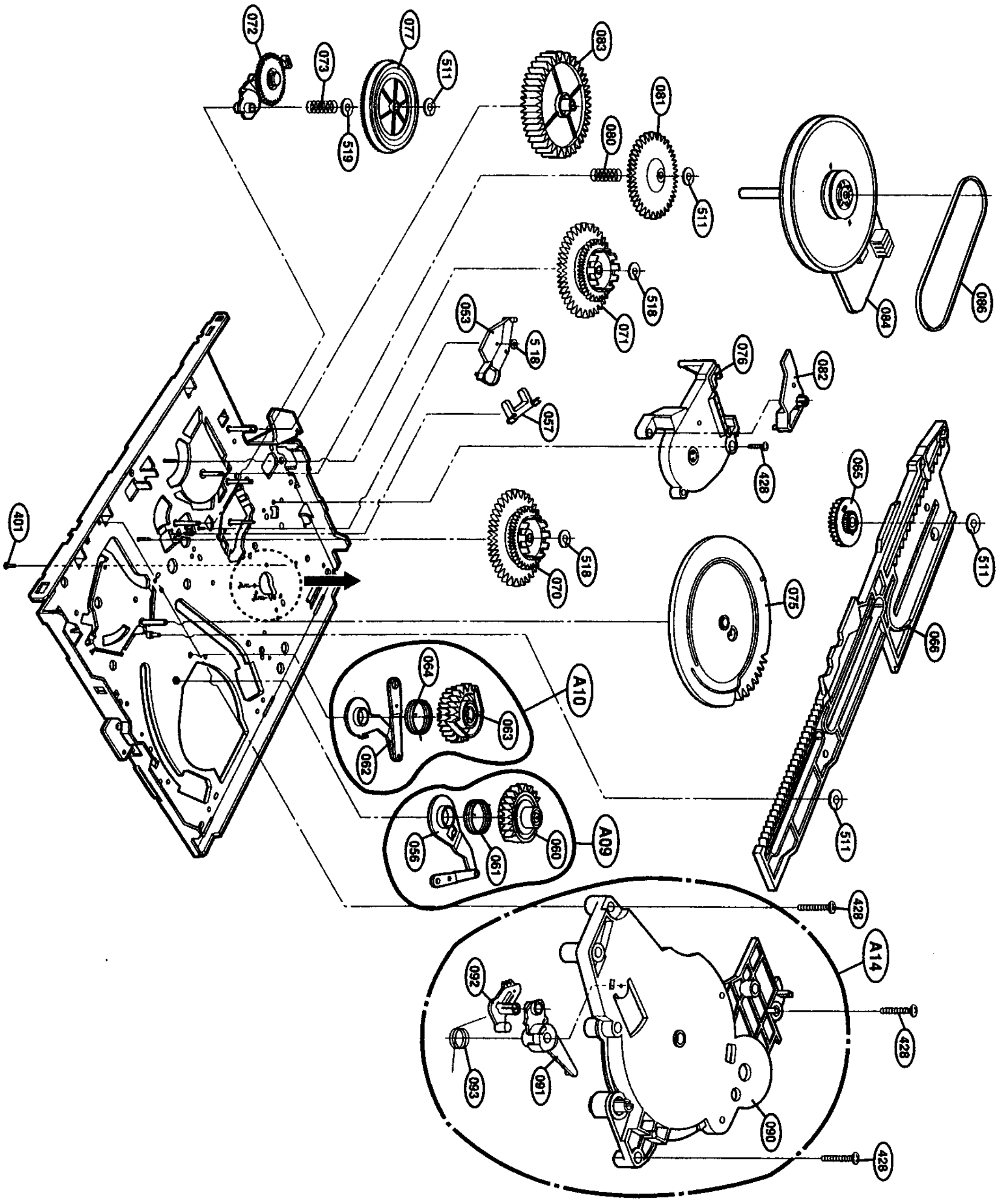

001
002
405
406
A01
006
421
421
408
012
013
014
A04
095
096
020
026
025
A13
015
A12
030
032
031
035
426
036
008
504
021
504
022
004
074
427
A02
007
010
427
074
A03
426
040
042
003
A06
408
408
048
045
047
046
A05
044
043
A07
041
051
050
055

NOTE) · ◯ marks the optional parts only in VCR (Video Cassette Recorder) Models.

EXPLODED VIEW

2. Moving Mechanism Section (2)

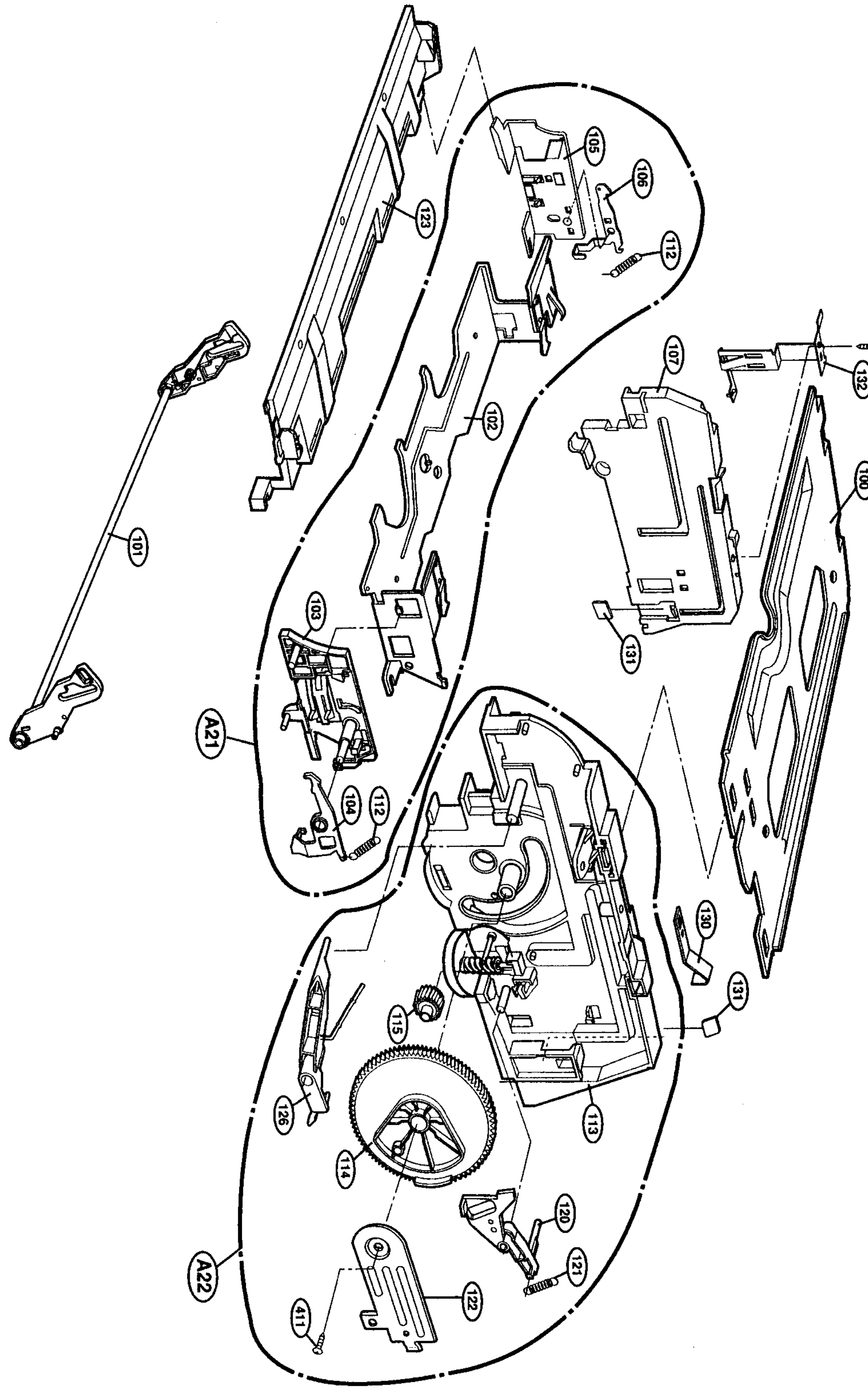
(Bottom View)


072
073
077
511
519
083
081
080
511
086
084
518
071
053
518
076
082
057
428
065
511
401
518
070
075
066
A10
064
063
062
511
A09
060
061
056
428
A14
092
093
091
090
428
428

NOTE) · ◯ is the additional parts of the VCR (Video Cassette Recoder) Models.

EXPLODED VIEW

3. Front Loading Mechanism Section


105
106
112
123
102
459
107
132
100
101
103
131
A21
104
112
130
131
115
126
113
114
120
121
A22
411
122

MEMO

SECTION 5 REPLACEMENT PARTS LIST

• Mechanical Section MODEL:N909P

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
ASSEMBLY PARTS SECTION						
		A00	6721R-0048B	DECK ASSY	D-27U (P, 4HF)	
		A01	6723R-0052B	DRUM ASSY	(4P6) 6CH LI (PAL HI-FI NORMA)	
	OR	A01	6723R-B052B	DRUM(CIRC) ASSY	(4P6) 6CH LI (PAL HIFI)	
	OR	A01	6723R-F052B	DRUM ASSY	6CH LI(PAL HI-FI NORMAL) 4P6	
		A02	225-361A	BASE	ASSY P2	
		A03	225-364A	BASE	ASSY P3	
		A04	386-394A	ARM	ASSY CLEANER	
		A05	386-405B	ARM	ASSY T/UP	
		A06	4811R-0004U	BRACKET ASSY	L/D MOTOR (D-27U/ NEW PWB)	
	OR	A07	340-070A	HOLDER	ASSY PINCH	
		A07	340-195A	HOLDER	ASSY PINCH	
		A09	435-435A	GEAR	ASSY P2	
		A10	435-437A	GEAR	ASSY P3	
		A12	333-329A	LEVER	ASSY TENSION	
		A13	328-075A	BAND	ASSY TENSION	NSP
		A14	4811R-0010B	BRACKET ASSY	CAM	
		A20	3661R-0001A	HOUSING ASSY	D-27	
		A21	4931R-0004A	HOLDER ASSY	CST	
		A22	4811R-0002A	BRACKET ASSY	SIDE(R)	
PARTS SECTION						
		001	6723R-0057B	DRUM ASSY	SUB 6CH LI (PAL HI-FI NORMAL)	
	OR	002	414-217B	MOTOR	ASSY DRUM E20XL20 D27 SANKYO	
		002	4680RB0002A	MOTOR(MECH)	GVD-027U D-27U DRUM LGEC	
		003	311-011A	CHASSIS ASSY'	D27	NSP
		004	225-362A	BASE	SUB ASSY P2	NSP
		006	225-368A	BASE	DRUM	
		007	225-371E	BASE	ASSY A/C (LGEC VE)	
		008	523-833A	HEAD	FE HVFHU0010AK ALPS	
		010	225-365A	BASE	SUB ASSY P3	NSP
		012	225-399A	BASE	ASSY BRUSH	
		013	386-395A	ARM	CLEANER	NSP
		014	324-835B	HOLDER	ASSY CLEANER	NSP
		015	386-392A	ARM	ASSY TENSION	
		020	442-640A	SPRING	TENSION	
		021	456-070A	REEL	S27	
		022	456-071A	REEL	T27	
		025	340-008A	HOLDER	BAND(C)	NSP
		026	333-330A	LEVER	TENSION	NSP
		030	4421R-0002A	BRAKE ASSY	SUPPLY (U)	
		031	338-114B	BRAKE ASSY	T/UP (U)	
		032	442-655A	SPRING	MB	
		035	316-019A	BODY	PRISM LED	
		036	257-071A	PLATE	UP	
		040	435-441A	GEAR	PINCH CAM	
		041	435-440A	GEAR	PINCH	
		042	435-439A	GEAR	CNT	
		043	386-404B	ARM	SUB ASSY T/UP	

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		044	442-650A	SPRING	T/UP	NSP
		045	321-669A	BRACKET	L/D MOTOR	
		046	414-199B	MOTOR	ASSY L/D	
		047	4422R-0001A	WORM	L/D MOTOR	
		048	437-020A	WORM	WHEEL	
		050	4261R-0002A	ARM ASSY!	PINCH (D/C)	
		051	340-073A	HOLDER	SUB ASSY PINCH	
		053	4510R-0010A	LEVER	F/R (U)	
		055	442-649A	SPRING	PINCH	NSP
		056	333-334A	LEVER	ASSY P2	NSP
		057	4260R-0007A	ARM	F/R	
		060	435-436A	GEAR	P2	NSP
		061	442-647A	SPRING	P2	NSP
		062	333-336A	LEVER	ASSY P3	NSP
		063	435-438A	GEAR	P3	NSP
		064	442-648A	SPRING	P3	NSP
		065	435-442A	GEAR	P/S	
		066	3300R-0123A	PLATE	SLIDER(U)	
		070	337-007B	CLUTCH	ASSY S27	
		071	337-008A	CLUTCH	ASSY T27	
		072	386-396A	ARM	ASSY IDLER	
		073	442-644A	SPRING	UP/D	
		074	434-173A	ROLLER	ASSY GUIDE	
	OR	074	434-173C	ROLLER	ASSY GUIDE	
	OR	074	434-173D	ROLLER	ASSY GUIDE(DAI YANG)	
		075	435-433A	GEAR	CAM L/D	
		076	556-252B	SWITCH	MODE S/W(D-27),HMW0840-01,HOSI	
		077	435-432C	GEAR	PULLEY	
		080	442-656A	SPRING	H1	
		081	435-443A	GEAR	H1	
		082	333-339A	LEVER	H1	
		083	435-444A	GEAR	H-2	
		084	4680RA0001C	MOTOR(MECH)	GVC-027UA CAPSTAN LGEC	
		086	452-062A	BELT	CAPSTAN D74.6XT2.1	
		090	4810R-0043A	BRACKET	CAM (B/T)	
		091	4510R-0008A	LEVER	JOG (W/O SPRING)	
		092	435-434A	GEAR	JOG	
		093	442-646A	SPRING	JOG	
		095	333-338A	LEVER	TAB	
		096	442-652A	SPRING	TAB	
		100	3300R-0032A	PLATE	TOP	
		101	386-407A	ARM	ASSY F/L	
		102	4930R-0013A	HOLDER	CST	NSP
		103	4930R-0012A	HOLDER	BRACKET(R)	NSP
		104	4510R-0002A	LEVER	STOPPER(R)	NSP
		105	4930R-0011A	HOLDER	BRACKET(L)	NSP
		106	4510R-0001A	LEVER	STOPPER(L)	NSP
		107	4810R-0005A	BRACKET	SIDE(L)	
		111	442-659A	SPRING	STOPPER	NSP
		112	442-660A	SPRING	RELEASE	NSP
		113	4810R-0006A	BRACKET	SIDE(R)	NSP
		114	435-467A	GEAR	CAM F/L	NSP
		115	435-466A	GEAR	CONNECT	NSP
		120	333-342A	LEVER	SWITCH	NSP
		121	442-661A	SPRING	SWITCH	NSP

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		122	3300R-0006A	PLATE	COVER	NSP
		123	4974R-0006A	GUIDE	CST	
		126	465-040A	OPENER	DOOR	NSP
		130	257-075A	PLATE	GROUND	NSP
		131	257-106A	PLATE	REFLECTOR	NSP
		132	3300R-0033A	PLATE	GROUND(L)	NSP
				SCREW		
		401	1MPK0261718	SCREW MACHINE,PAN HEAD	+,- D2.6 L5.0 MSWR3/FZY	
		405	1MDC0262818	PAN HEAD MACHINE SCREW P/WASH+	D2.6 L12 MSWR3/FZY	
		406	1MEC0302018	PAN HEAD MACHINE SCREW S/W +	D 3.0 L 6.0 MSWR3/FZY	
		408	1MBC0302418	BINDING HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		411	353-046B	SCREW	SPECIAL (3X8 FZMY)	
		421	1MPC0302618	PAN HEAD MACHINE SCREW +!	D3.0 L10.0,MSWR3/FZY	
		426	1MPC0302018	PAN HEAD MACHINE SCREW +!	D 3.0 L 6.0 MSWR3/FZY	
		427	353-054B	SCREW	MINIATURE	
		428	353-221A	SCREW	M3-L15	
		429	353-046A	SCREW	SPECIAL (3X6 FZMY)	
				NUT, WASHER		
		504	354-001B	WASHER	P.S D3.1XD6X0.5T	
		511	354-080C	WASHER	STOPPER	
		518	354-128A	WASHER	STOPPER	
		519	354-128B	WASHER	STOPPER	

• Cabinet & Main Frame Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
				ASSEMBLY PARTS SECTION		
		A40	315-348X	FRAME ASSY	ASSY MAIN	NSP
		A42	6871R-1099A	PWB(PCB) ASSY	TIMER	
		A43	3721R-F075N	PANEL ASSY,FRONT[NORMAL PARTS]	N909P	
		A46	3501R-1075B	BOARD ASSY	MAIN	
				PARTS SECTION		
		250	3110R-0054S	CASE	TOP	
		260	315-347Q	FRAME	MAIN	NSP
		265	324-995A	HOLDER	PWB	
		268	255-359A	PLATE	SIDE GND	
		275	324-802A	HOLDER	DIGITRON	
		277	4941R-Z008A	KNOB ASSY	SHUTTLE	
		280	3720R-F045L	PANEL	FRONT	NSP
		283	3580R-0024P	DOOR	CST(N909P)	
		284	442-681A	SPRING	DOOR	
		300	6410RCH002B	POWER CORD	DW5000E(FILTER)CNT DONGWON VDE	
	OR	300	681-051C	CORD	KKP-419J/B-172, KLCE-2F,CNT	
		309	321-714A	BRACKET	HOUSING	
		320	3721R-D012M	PANEL ASSY,DISTRIBUTOR[NORMAL	N909P HIFI-EUROAV1_2	

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		323	3111R-0065A	CASE ASSY	P-AMP	
		330	*220-050A*	*COVER*	BOTTOM	
				SCREW		
		452	353-051A	SCREW	SPECIAL	
		462	353-136A	SCREW	SPECIAL(FBK) (353S353A)	
		463	1MBC0302418	BINDING HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		472	353-051E	SCREW	SPECIAL (3X12)	

· Packing Accessory Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		801	3835RP0026R	INSTRUCTION ASSY	N909P 3GL1L	
		802	3890R-H102A	BOX	N909P 3GL1L SW3-A 0.921 2 FLX	
		803	3920R-0046A	PACKING	E,PS	
	OR	804	292-053A	BAG	SOFT(VCP)	NSP
		804	3858R-0006A	SHEET	ROLL(W630XL300MX0.5T)	NSP
		806	861-033B	CABLE SET ASSY	RF-CABLE ASSY FTZ (D.D)	
		808	534-002C	BATTERY	1.5V AAM UM-3 LOL 1PAIR	
		810	861-520B	CABLE ASSY	SHORT TERMINAL	
		811	564-017L	PLUG ASSY	PHONE CORD 1WAY (YL)	
		812	564-018M	PLUG ASSY	P/CORD 2WAY(RD/WH)	

· Remote Control Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		900	6711R1P013W	REMOTE CONTROLLER ASSY	N1(N909P)	

· Fixture Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		FIX1	6871R-0288W	PWB(PCB) ASSY	FIXTURE(D-27U CAPSTAN)	
		FIX2	6871R-0288B	PWB ASSY!	D-27 JIG	
		FIX3	6871R-0288D	PWB ASSY!	D-27 JIG	
		FIX4	6871R-0288E	PWB ASSY!	D-27 JIG	
		FIX5	322-065A	SUPPORTER	DECK SVC	

· Electrical Section

RUN DATE : 98.09.14

CAUTION: The * marks in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the SAFETY PRECAUTIONS and SERVICING PRECAUTIONS in the manual. Do not degrade the safety of the unit through improper servicing.

Tolerance

Symbol	C	J	K	M	N	Z	P	A
%	±2	±5	±10	±20	±30	+80 -20	+100 -10	+100 -10

CC, CJ, CK: Capacitor, Ceramic
CE: Capacitor, Electrolytic
CQ: Capacitor, Polyester

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
			CAPACITOR	
		C106	0CE1064K638	10M SRA 50V M FM5 TP(5)
		C110	0CN1040K948	0.1M 50V Z F TA26
		C111	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C141	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C301	0CN1030F678	0.01M 16V M Y TA26
		C302	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C303	0CN1040K948	0.1M 50V Z F TA26
		C304	0CN2230H948	0.022M 25V Z F TA26
		C305	0CE4775C638	470M SR 6.3V M FM5 TP(5)
		C306	0CN1040K948	0.1M 50V Z F TA26
		C307	0CN1030F678	0.01M 16V M Y TA26
		C308	0CN1040K948	0.1M 50V Z F TA26
		C309	0CN1030F678	0.01M 16V M Y TA26
		C310	0CN8220F668	8200P 16V M X TA26
		C311	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C312	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C313	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C314	0CN2230H948	0.022M 25V Z F TA26
		C315	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C316	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C317	0CN1030F678	0.01M 16V M Y TA26
		C318	0CN1040K948	0.1M 50V Z F TA26
		C319	0CN1040K948	0.1M 50V Z F TA26
		C320	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C321	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C322	0CX1000K408	10P 50V J SL TA26
		C323	0CN1810K518	180P 50V K B TA26
		C324	0CN1040K948	0.1M 50V Z F TA26
		C325	0CN1030F678	0.01M 16V M Y TA26
		C326	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C327	0CN1020K518	1000P 50V K B TA26
		C328	0CN1030F678	0.01M 16V M Y TA26
		C329	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C330	0CN2230H948	0.022M 25V Z F TA26
		C331	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C332	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C333	0CC3900K415	39P 50V J NPO TP
		C334	0CN1810K518	180P 50V K B TA26
		C335	0CE2244K638	0.22M SRA 50V M FM5 TP(5)
		C336	0CX5600K408	56P 50V J SL TA26
		C337	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C338	0CN2230H948	0.022M 25V Z F TA26
		C339	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C340	0CN1040K948	0.1M 50V Z F TA26
		C341	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C342	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C343	0CN4730K948	0.047M 50V Z F TA26
		C344	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C345	0CN8200K518	82PF 50V K B TA26
		C346	0CN1030F678	0.01M 16V M Y TA26
		C351	0CN1040K948	0.1M 50V Z F TA26
		C353	0CN3920F668	3900P 16V M X TA26
		C354	0CE2264F638	22M SRA 16V M FM5 TP(5)
		C355	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C356	0CN1030F678	0.01M 16V M Y TA26
		C357	0CN1220F668	1200P 16V M X TA26
		C358	0CN1020K518	1000P 50V K B TA26
		C359	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C360	0CQ1532K409	0.015UF S 50V J PE TP
		C361	0CQ3332K409	0.033UF S 50V J PE TP
		C362	0CN2230H948	0.022M 25V Z F TA26
		C363	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C364	0CE2264F638	22M SRA 16V M FM5 TP(5)
		C365	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C366	0CN1040K948	0.1M 50V Z F TA26
		C367	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C369	0CE3364F638	33M SRA 16V M FM5 TP(5)
		C370	0CQ1532K409	0.015UF S 50V J PE TP
		C371	0CN1030F678	0.01M 16V M Y TA26
		C372	0CQ2232K409	0.022UF S 50V J PE TP
		C373	0CN6810K518	680P 50V K B TA26
		C401	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C402	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C403	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C404	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C405	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C406	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C407	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C408	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C409	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C410	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C411	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C412	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C413	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C414	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C415	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C417	0CN2230H948	0.022M 25V Z F TA26
		C418	0CN1040K948	0.1M 50V Z F TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C419	0CN4720F668	4700P 16V M X TA26
		C420	0CE4766F638	47M SMS 16V M FM5 TP5
		C421	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C422	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C423	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C424	0CE4766F638	47M SMS 16V M FM5 TP5
		C425	0CN4720F668	4700P 16V M X TA26
		C426	0CN1040K948	0.1M 50V Z F TA26
		C427	0CN2230H948	0.022M 25V Z F TA26
		C428	0CE4766F638	47M SMS 16V M FM5 TP5
		C429	0CN2230H948	0.022M 25V Z F TA26
		C430	0CE4766F638	47M SMS 16V M FM5 TP5
		C431	0CN1030F678	0.01M 16V M Y TA26
		C432	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C433	0CE4766F638	47M SMS 16V M FM5 TP5
		C434	0CN1810K518	180P 50V K B TA26
		C435	0CN1040K948	0.1M 50V Z F TA26
		C436	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C437	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C438	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C439	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C440	0CN2230H948	0.022M 25V Z F TA26
		C441	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C442	0CX4700K408	47P 50V J SL TA26
		C443	0CE4766F638	47M SMS 16V M FM5 TP5
		C444	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C501	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C502	0CN1020K518	1000P 50V K B TA26
		C503	0CN2230H948	0.022M 25V Z F TA26
		C504	0CN1030F678	0.01M 16V M Y TA26
		C505	0CC1200K415	12P 50V J NP0 TS
		C506	0CC1200K415	12P 50V J NP0 TS
		C507	0CN1040K948	0.1M 50V Z F TA26
		C508	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C509	0CN2230H948	0.022M 25V Z F TA26
		C510	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C511	0CN2230H948	0.022M 25V Z F TA26
		C513	0CE1074F638	100U SRA 16V M FM5 TP(5)
		C514	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C515	0CN1020K518	1000P 50V K B TA26
		C516	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C517	0CN2230H948	0.022M 25V Z F TA26
		C518	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C519	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C520	0CN1040K948	0.1M 50V Z F TA26
		C521	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C522	0CN1020K518	1000P 50V K B TA26
		C523	0CE3364F638	33M SRA 16V M FM5 TP(5)
		C524	0CN2220F668	2200P 16V M X TA26
		C525	0CN1810K518	180P 50V K B TA26
		C526	0CN5610K518	560P 50V K B TA26
		C528	0CN1020K518	1000P 50V K B TA26
		C529	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C530	0CE4753K638	4.7M SRE 50V M FM5 TP(5)
		C531	0CN1040K948	0.1M 50V Z F TA26
		C532	0CN1810K518	180P 50V K B TA26
		C533	0CX3900K408	39P 50V J SL TA26
		C534	0CN2230H948	0.022M 25V Z F TA26
		C535	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C536	0CN1030F678	0.01M 16V M Y TA26
		C537	0CC3300K415	33P 50V J NP0 TP
		C538	0CN1030F678	0.01M 16V M Y TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C539	0CN1030F678	0.01M 16V M Y TA26
		C540	0CN1030F678	0.01M 16V M Y TA26
		C541	0CN2230H948	0.022M 25V Z F TA26
		C542	0CN2230H948	0.022M 25V Z F TA26
		C543	0CN1030F678	0.01M 16V M Y TA26
		C544	0CN1020K518	1000P 50V K B TA26
		C545	0CN1020K518	1000P 50V K B TA26
		C546	0CQ4732K409	0.047UF S 50V J PE TP
		C547	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C548	0CN2230H948	0.022M 25V Z F TA26
		C549	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C550	0CC1800K415	18P 50V J NP0 TS
		C551	0CC1800K415	18P 50V J NP0 TS
		C552	0CC1500K415	15P 50V J NP0 TS
		C553	0CC1500K415	15P 50V J NP0 TS
		C554	0CE4764H638	47M SRA 25V M FM5 TP(5)
		C555	0CN1030F678	0.01M 16V M Y TA26
		C556	0CQ3332K409	0.033UF S 50V J PE TP
		C557	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C558	0CN1040K948	0.1M 50V Z F TA26
		C559	0CN1030F678	0.01M 16V M Y TA26
		C560	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C561	0CN2230H948	0.022M 25V Z F TA26
		C563	0CN1040K948	0.1M 50V Z F TA26
		C564	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C565	0CN2230H948	0.022M 25V Z F TA26
		C566	0CN1030F678	0.01M 16V M Y TA26
		C567	0CN6810K518	680P 50V K B TA26
		C569	0CC3300K415	33P 50V J NP0 TP
		C570	0CN1020K518	1000P 50V K B TA26
		C571	0CN1040K948	0.1M 50V Z F TA26
		C590	0CN1040K948	0.1M 50V Z F TA26
		C5X1	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C5X2	0CN2230H948	0.022M 25V Z F TA26
		C5X4	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C5X7	0CQ4732K409	0.047UF S 50V J PE TP
		C5X8	0CQ4732K409	0.047UF S 50V J PE TP
		C601	0CN1040K948	0.1M 50V Z F TA26
		C603	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C604	0CN1030F678	0.01M 16V M Y TA26
		C606	0CN1010K518	100P 50V K B TA26
		C608	0CN1010K518	100P 50V K B TA26
		C609	0CN2230H948	0.022M 25V Z F TA26
		C610	0CN1020K518	1000P 50V K B TA26
		C611	0CN1020K518	1000P 50V K B TA26
		C612	0CE1064K638	10M SRA 50V M FM5 TP(5)
		C613	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C614	0CN1030F678	0.01M 16V M Y TA26
		C617	0CN1040K948	0.1M 50V Z F TA26
		C701	0CX2400K408	24P 50V J SL TA26
		C702	0CX4700K408	47P 50V J SL TA26
		C704	0CN1030F678	0.01M 16V M Y TA26
		C705	0CN2230H948	0.022M 25V Z F TA26
		C706	0CE4766F638	47M SMS 16V M FM5 TP5
		C707	0CE4766F638	47M SMS 16V M FM5 TP5
		C708	0CN2230H948	0.022M 25V Z F TA26
		C710	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C711	0CQ1031N409	0.01UF 100V J PE TP
		C712	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C713	0CN1020K518	1000P 50V K B TA26
		C714	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C715	0CN1010K518	100P 50V K B TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C716	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C717	0CN2230H948	0.022M 25V Z F TA26
		C718	0CE4766F638	47M SMS 16V M FM5 TP5
		C719	0CE4766F638	47M SMS 16V M FM5 TP5
		C720	0CN2230H948	0.022M 25V Z F TA26
		C721	0CN2230H948	0.022M 25V Z F TA26
		C722	0CQ1231N409	0.012U 100V J POLY TP
		C723	0CQ1231N409	0.012U 100V J POLY TP
		C724	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C725	0CE2274C638	220M SRA 6.3V M FM5 TP(5)
		C726	0CN1030F678	0.01M 16V M Y TA26
		C727	0CN1040K948	0.1M 50V Z F TA26
		C728	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C729	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C730	0CQ3921N409	0.0039U 100V J POLY TP
		C731	0CX4700K408	47P 50V J SL TA26
		C732	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C733	0CN2230H948	0.022M 25V Z F TA26
		C734	0CE4766F638	47M SMS 16V M FM5 TP5
		C735	0CN1020K518	1000P 50V K B TA26
		C736	0CN1020K518	1000P 50V K B TA26
		C7A1	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C7A2	0CN1040K948	0.1M 50V Z F TA26
		C7A3	0CN2230H948	0.022M 25V Z F TA26
		C7A4	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C7A5	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C7A8	0CN2230H948	0.022M 25V Z F TA26
		C7A9	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C7C1	0CX3300K408	33P 50V J SL TA26
		C7C3	0CN1030F678	0.01M 16V M Y TA26
		C801	0CN1020K518	1000P 50V K B TA26
		C802	0CN1040K948	0.1M 50V Z F TA26
		C803	0CN1040K948	0.1M 50V Z F TA26
		C804	0CN1040K948	0.1M 50V Z F TA26
		C805	0CN1040K948	0.1M 50V Z F TA26
		C806	0CN1030F678	0.01M 16V M Y TA26
		C809	0CN1030F678	0.01M 16V M Y TA26
		C810	0CN1030F678	0.01M 16V M Y TA26
		C811	0CN2230H948	0.022M 25V Z F TA26
		C812	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C813	0CN1030F678	0.01M 16V M Y TA26
		C814	0CN1030F678	0.01M 16V M Y TA26
		C815	0CE3354K638	3.3M SRA 50V M FM5 TP(5)
		C816	0CN1040K948	0.1M 50V Z F TA26
		C817	0CN1030F678	0.01M 16V M Y TA26
		C818	0CN1040K948	0.1M 50V Z F TA26
		C819	0CN1030F678	0.01M 16V M Y TA26
		C820	0CN1030F678	0.01M 16V M Y TA26
		C821	0CN1030F678	0.01M 16V M Y TA26
		C822	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C823	0CN2230H948	0.022M 25V Z F TA26
		C824	0CN4730K948	0.047M 50V Z F TA26
		C901	0CN2230H948	0.022M 25V Z F TA26
		C902	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C903	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C904	0CN2230H948	0.022M 25V Z F TA26
		C905	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C906	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C907	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C908	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C912	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C913	0CE1064F638	10M SRA 16V M FM5 TP(5)

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C914	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C915	0CN4710K518	470P 50V K B TA26
		C917	0CN4710K518	470P 50V K B TA26
		C919	0CN4710K518	470P 50V K B TA26
		C922	0CN4710K518	470P 50V K B TA26
		C924	0CN4710K518	470P 50V K B TA26
		C926	0CN4710K518	470P 50V K B TA26
		C931	0CN4710K518	470P 50V K B TA26
		C932	0CN1020K518	1000P 50V K B TA26
		C933	0CN1020K518	1000P 50V K B TA26
		C938	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C939	0CN1030F678	0.01M 16V M Y TA26
		CP03	624-088F	PCX2 275V 0.1UF,M(PILKO)
		CP05	0CG2210U610	220 PF 400V M B R(NK,AD,SD)
		CP06	624-082F	CE 68UF/400V SHLVN
		CP07	0CQ1042K409	0.1UF S 50V J PE TP
		CP09	0CQ5622K409	5600PF S 50V J PE TP
		CP10	0CQ1022K409	1000PF S 50V J PE TP
		CP11	0CE336BH638	33UF KME 25V M FM5 TP5
		CP12	0CQ4732K409	0.047UF S 50V J PE TP
		CP14	624-087A	HIGH-VOL 150P/1KV SMPS NEW-KOR
		CP15	0CQ1031Y502	0.0100UF 630V K PE FM10
		CP16	0CQ4732K409	0.047UF S 50V J PE TP
		CP17	624-085D	CE 47UF/50V KME (SMPS)
		CP18	624-082G	CE 470UF/25V SHL(10*12.5)T/P
		CP19	0CE108BF638	1000UF KME TYPE 16V M FM5 TP 5
		CP20	0CE3376D638	330UF SMS 10V M FM5 TP5
		CP21	624-085D	CE 47UF/50V KME (SMPS)
		CP22	0CE477BH638	470UF KME 25V M FM5 TP5
		CP24	0CG3320U642	3300 PF 400V M F FM (NK,AD,SD)
		CP25	0CE2276D638	220M SMS 10V M FM5 TP(5)
		CP28	624-088F	PCX2 275V 0.1UF,M(PILKO)

DIODE

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		BDP01	0DD160000DA	S1WBA60(1A 600V) SHIDENKEN
		D101	0DD133009AA	1SS133 DETECT,SW TP
		D301	0DD133009AA	1SS133 DETECT,SW TP
		D302	0DD133009AA	1SS133 DETECT,SW TP
		D509	0DD133009AA	1SS133 DETECT,SW TP
		D600	0DD133009AA	1SS133 DETECT,SW TP
		D613	0DD133009AA	1SS133 DETECT,SW TP
		D614	0DD133009AA	1SS133 DETECT,SW TP
		D616	0DD133009AA	1SS133 DETECT,SW TP
		D901	0DD133009AA	1SS133 DETECT,SW TP
		DP01	0DD221009AA	ERA22-10 KFLB,TP ,R T/P,FUJI
		DP02	0DD133009AA	1SS133 DETECT,SW TP
		DP05	0DD133009AA	1SS133 DETECT,SW TP
		DP07	0DD207000AB	2A07 2A RECT(T/S)P=12.5 F DELT
		DP08	0DD810040AA	ERC81-004L,FUJI L TYPE
		DP10	0DD010009AC	EU01W(R-FORM) TP SANKEN
		DP12	0DD010009AC	EU01W(R-FORM) TP SANKEN
		DP13	0DR310000AA	RU3YXLF-C1 BK SANKEN D4 100V 2
		DP17	0DD010009AC	EU01W(R-FORM) TP SANKEN

LEVEL METER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		DG601	6302R2P002B	SVV09SS11L SAMSUNG PAL Q 16.

FUSE

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		F101	585-011C	T 1.6A 250V S506

FILTER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		FL701	616-038E	CERAMIC SFT5.74MA
		FL702	616-038D	CERAMIC SFT5.5MA MURATA
		LP02	616-145H	SHT LFS2020V4-04350

IC

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		IC301	0IMA357000A	NN3570 100QFP BK PAL AVC MULTI
		IC401	0IPH960400A	TDA9604H 44QFP BK HIFI
	OR	IC402	0IGS324000A	GL324 (QUAD PUPLE OP AMP)
		IC402	0ISS324000B	KA324 OP AMP
		IC501	0IGS397729A	GMS3977-AA29F 100QFP BK MICOM
		IC502	0ISA164100A	LB1641(1-CH)MOTOR DRIV SANYO %
		IC503	0IAL241600B	AT24C16-10PC 8D EEPROM 16K
	OR	IC503	0INS241600B	NM24C16N 8D EEPROM(16K,IIC)
		IC504	0IKE703100A	KIA7031P 3P 3.1V RESET(TAPING)
		IC505	0IKE704200B	KIA7042P 3P 4.2V RESET(TAPING)
		IC5X1	0ISM565000A	SDA5650 DIP14 BK VPS+PDS
		IC601	0IMA125100A	MN12510 QFP44 FLP DRIVE
		IC701	0ITF286014A	U2860B DIP14 FM DEMOD
		IC702	0IPH984000A	TDA9840 ST MATRIX
		IC801	0IMA336900A	AN3369SB 36SOP BK 6CH PREAMP
		IC901	0ISG640000A	STV6400 S/W IC DIP
	OR	ICP01	0IFE531100A	FA5311P PWM IC (FUJI) DIP
		ICP01	0ISS755200A	KA7552 PWMIC 8DIP 30V
		ICP03	0ISS431000A	KA431AZ (LM431AZ)

JACK

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		JK601	572-034S	BJP-202(YL) BAEEUN ST,2P
		JK602	572-034R	BJP-202(WHITE) BAEEUN ST,2P
		JK603	572-034Q	BJP-202(RED) BAEEUN ST,2P
		JK901	572-036H	BJP 03-01-G BAEEUN 2 ANGLE WH-

COIL

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		08RA	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BCP02	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BCP03	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BD601	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BD602	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BD901	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		FL351	633-032K	BIAC OSC,1CHIP 5V(KS-75M)
		L301	0LR1000J025	100UH 5% 4X5 TR5
		L302	0LR1000J025	100UH 5% 4X5 TR5
		L303	0LR1000J025	100UH 5% 4X5 TR5
		L304	0LA0332K018	33M K 2.3X3.4 L5 TP
		L351	0LR1000J025	100UH 5% 4X5 TR5
		L352	0LR1000K035	100M K 6X6 L5 TP
		L353	0LR1502J045	0.015H J 6X7 L5 TP
		L354	0LR1000J025	100UH 5% 4X5 TR5
		L402	0LR1000J025	100UH 5% 4X5 TR5
		L403	0LR2200J025	220UH 5% 4X5 TR5
		L404	0LR5600J025	560UH 5% 4X5 TR5
		L405	0LR2200J025	220UH 5% 4X5 TR5
		L502	0LR1000J025	100UH 5% 4X5 TR5
		L503	0LR1000J025	100UH 5% 4X5 TR5
		L504	0LR1000J025	100UH 5% 4X5 TR5
		L505	635-027C	EL0405RA SKI150G-3 K-TDK 15UH
		L506	0LA0332K018	33M K 2.3X3.4 L5 TP
		L510	0LR1000J025	100UH 5% 4X5 TR5
		L5X1	0LR1000J025	100UH 5% 4X5 TR5
		L602	0LA1000K018	100M K 2.3X3.4 L5 TP
		L603	0LA1000K018	100M K 2.3X3.4 L5 TP
		L604	0LR1000J025	100UH 5% 4X5 TR5
		L701	0LR1000J025	100UH 5% 4X5 TR5
		L702	0LR1000J025	100UH 5% 4X5 TR5
		L703	0LR2201J045	2200M J 6X7 L5 TP
		L704	0LR1000J025	100UH 5% 4X5 TR5
		L705	0LR1000J025	100UH 5% 4X5 TR5
		L707	0LA0122K018	12M K 2.3X3.4 L5 TP
		L708	0LR1000J025	100UH 5% 4X5 TR5
		L7A2	0LR1000J025	100UH 5% 4X5 TR5
		L7A3	0LR0472J025	47UH 5% 4X5 TR5
		L801	0LR1000J025	100UH 5% 4X5 TR5
		L802	0LR8200J025	820UH 5% 4X5 TR5
		L803	0LR1000J025	100UH 5% 4X5 TR5
		L804	0LA0470K018	0.47M K 2.3X3.4 L5 TP
		L901	0LR1000J025	100UH 5% 4X5 TR5
		L902	0LR1000J025	100UH 5% 4X5 TR5
		L903	0LA1000K018	100M K 2.3X3.4 L5 TP
		L904	0LA1000K018	100M K 2.3X3.4 L5 TP
		L905	0LA1000K018	100M K 2.3X3.4 L5 TP
		L906	0LA1000K018	100M K 2.3X3.4 L5 TP
		L908	0LA1000K018	100M K 2.3X3.4 L5 TP
		L909	0LA1000K018	100M K 2.3X3.4 L5 TP
		L910	0LA1000K018	100M K 2.3X3.4 L5 TP
		L911	0LA1000K018	100M K 2.3X3.4 L5 TP
		L913	0LA1000K018	100M K 2.3X3.4 L5 TP
		L914	0LA1000K018	100M K 2.3X3.4 L5 TP
		LP03	633-088D	CHOCK ,20UH,LEAD CUT
		LP04	633-088D	CHOCK ,20UH,LEAD CUT

LED

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
	OR	LED501	0DL380000AB	GL-380 IR-LED D-27 SHARP
		LED501	0DL380009AA	GL380JTP IR LED D-27 TP SHARP
		LED601	0DL112000AK	DL-11S2GNS(SUPPER,GREEN,03)KOC
		LED602	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC

CIRCUIT BOARD ASSEMBLY

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		PBM00	6871R-1075B	MAIN
		PBNH00	6871R-1078A	A2/HIFI

TRANSFORMER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		PTP01	642-023H	S/W TRANS SHT-023H,DYT-023H

TRANSISTOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
	OR	FEP01	0TF266600AA	2SK2666 BK SHINDENKEN 900V 3A
		FEP01	0TF380000AA	SSSS3N80A BK SAMSUNG 800V 3A T
		Q102	0TR127309AA	KTA1273-TP-Y (KTA966A)KEC
		Q103	0TR127309AA	KTA1273-TP-Y (KTA966A)KEC
		Q104	0TR319909AF	KTC3199-BL MINI TP KEC
		Q112	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q113	0TR141409AA	KTD1414(TO220IS) CUTING TP KEC
		Q121	0TR103009AF	KRA103M-TP (KRA2203) KEC
		Q122	0TR103009AF	KRA103M-TP (KRA2203) KEC
		Q123	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q124	0TR319909AF	KTC3199-BL MINI TP KEC
		Q131	0TR319909AF	KTC3199-BL MINI TP KEC
	OR	Q132	0TR126809BA	KTA1268-BL TP KEC
		Q132	0TR709009AE	KSA709C-Y TP SAMSUNG T0-92
		Q301	0TR126709AC	KTA1267-GR MINI TP KEC
		Q351	0TR319909AF	KTC3199-BL MINI TP KEC
		Q352	0TR126709AC	KTA1267-GR MINI TP KEC
		Q353	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q354	0TR319909AF	KTC3199-BL MINI TP KEC
		Q355	0TR319909AF	KTC3199-BL MINI TP KEC
		Q401	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q402	0TR319909AF	KTC3199-BL MINI TP KEC
		Q403	0TR319909AF	KTC3199-BL MINI TP KEC
		Q404	0TR319909AF	KTC3199-BL MINI TP KEC
		Q405	0TR103009AF	KRA103M-TP (KRA2203) KEC
		Q406	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q501	0TR126709AC	KTA1267-GR MINI TP KEC
		Q502	0TR319909AF	KTC3199-BL MINI TP KEC
		Q503	0TR933009DB	STA933Y TP KOTECO
		Q504	0TR126709AC	KTA1267-GR MINI TP KEC
		Q505	0TR933009DB	STA933Y TP KOTECO
		Q506	0TR126709AC	KTA1267-GR MINI TP KEC
		Q507	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q509	0TR126709AC	KTA1267-GR MINI TP KEC
		Q510	0TR319909AF	KTC3199-BL MINI TP KEC
		Q511	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q512	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q513	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q515	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q519	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q521	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q5X1	0TR319909AF	KTC3199-BL MINI TP KEC
		Q601	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q602	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q603	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q604	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q605	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q701	0TR319909AF	KTC3199-BL MINI TP KEC
		Q702	0TR126709AC	KTA1267-GR MINI TP KEC
		Q703	0TR319909AF	KTC3199-BL MINI TP KEC
		Q704	0TR319909AF	KTC3199-BL MINI TP KEC
		Q801	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q802	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q901	0TR126709AC	KTA1267-GR MINI TP KEC
		Q902	0TR126709AC	KTA1267-GR MINI TP KEC
		Q903	0TR126709AC	KTA1267-GR MINI TP KEC
	OR	S501	0TR581100BA	ST5811-A,B
		S501	0TR581139AA	ST5811S3T TP
	OR	S502	0TR581100BA	ST5811-A,B
		S502	0TR581139AA	ST5811S3T TP

RESISTOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		L601	0RD0822F608	82 1/6W 5 TA26
		R102	0RD2700F608	270 1/6W 5 TA26
		R103	0RD2700F608	270 1/6W 5 TA26
		R104	0RD2700F608	270 1/6W 5 TA26
		R105	0RD2700F608	270 1/6W 5 TA26
		R106	0RD4700F608	470 1/6W 5 TA26
		R107	0RD4701F608	4.7K 1/6W 5 TA26
		R108	0RD6801F608	6.8K 1/6W 5 TA26
		R109	0RD1002F608	10K 1/6W 5 TA26
		R111	0RD1202F608	12K 1/6W 5 TA26
		R119	0RD1800F608	180 1/6W 5 TA26
		R122	0RD2201F608	2.2K 1/6W 5 TA26
		R123	0RD2201F608	2.2K 1/6W 5 TA26
		R125	0RD1202F608	12K 1/6W 5 TA26
		R126	0RD1202F608	12K 1/6W 5 TA26
		R131	0RD1001F608	1.0K 1/6W 5 TA26
		R132	0RD3302F608	33K 1/6W 5 TA26
		R144	0RD5600F608	560 1/6W 5 TA26
		R301	0RD1002F608	10K 1/6W 5 TA26
		R302	0RD1003F608	100K 1/6W 5 TA26
		R304	0RD1003F608	100K 1/6W 5 TA26
		R305	0RD1000F608	100 1/6W 5 TA26
		R306	0RD1000F608	100 1/6W 5 TA26
		R307	0RD1001F608	1.0K 1/6W 5 TA26
		R308	0RD2703F608	270K 1/6W 5 TA26
		R309	0RD1204F608	1.2M 1/6W 5 TA26
		R310	0RD1000F608	100 1/6W 5 TA26
		R311	0RD1200F608	120 1/6W 5 TA26
		R312	0RD2703F608	270K 1/6W 5 TA26
		R313	0RD2703F608	270K 1/6W 5 TA26
		R314	0RD5601F608	5.6K 1/6W 5 TA26
		R315	0RD1500F608	150 1/6W 5 TA26
		R318	0RD5600F608	560 1/6W 5 TA26
		R320	0RD1004F608	1.0M 1/6W 5 TA26
		R321	0RD1801F608	1.8K 1/6W 5 TA26
		R351	0RD1001F608	1.0K 1/6W 5 TA26
		R353	0RD3301F608	3.3K 1/6W 5 TA26
		R354	0RD1500F608	150 1/6W 5 TA26
		R355	0RD3303F608	330K 1/6W 5 TA26
		R356	0RD1202F608	12K 1/6W 5 TA26
		R357	0RD5100F608	510 1/6W 5 TA26
		R358	0RD3302F608	33K 1/6W 5 TA26
		R359	0RD2202F608	22K 1/6W 5 TA26
		R360	0RD2701F608	2.7K 1/6W 5 TA26
		R361	0RD2200F608	220 1/6W 5 TA26
		R362	0RD6800F608	680 1/6W 5 TA26
		R363	0RD2204F608	2.2M 1/6W 5 TA26
		R364	0RD1202F608	12K 1/6W 5 TA26
		R365	0RD5602F608	56K 1/6W 5 TA26
		R366	0RD1001F608	1.0K 1/6W 5 TA26
		R367	0RD0472F608	47 1/6W 5 TA26
		R368	0RD4701F608	4.7K 1/6W 5 TA26
		R369	0RD2701F608	2.7K 1/6W 5 TA26
		R370	0RD1002F608	10K 1/6W 5 TA26
		R371	0RD1502F608	15K 1/6W 5 TA26
		R372	0RD1001F608	1.0K 1/6W 5 TA26
		R373	0RD1502F608	15K 1/6W 5 TA26
		R374	0RD1001F608	1.0K 1/6W 5 TA26
		R401	0RD1002F608	10K 1/6W 5 TA26
		R402	0RD1502F608	15K 1/6W 5 TA26
		R403	0RD1002F608	10K 1/6W 5 TA26
		R404	0RD1502F608	15K 1/6W 5 TA26
		R405	0RD1002F608	10K 1/6W 5 TA26
		R406	0RD1502F608	15K 1/6W 5 TA26
		R407	0RD1002F608	10K 1/6W 5 TA26
		R408	0RD1502F608	15K 1/6W 5 TA26
		R409	0RD1001F608	1.0K 1/6W 5 TA26
		R410	0RD3304F608	3.3M 1/6W 5 TA26
		R412	0RD4702F608	47K 1/6W 5 TA26
		R413	0RD3901F608	3.9K 1/6W 5 TA26
		R414	0RD3902F608	39K 1/6W 5 TA26
		R415	0RD3901F608	3.9K 1/6W 5 TA26
		R416	0RD4702F608	47K 1/6W 5 TA26
		R417	0RD5600F608	560 1/6W 5 TA26
		R418	0RD1000F608	100 1/6W 5 TA26
		R419	0RD1000F608	100 1/6W 5 TA26
		R420	0RD1001F608	1.0K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R421	0RD1001F608	1.0K 1/6W 5 TA26
		R422	0RD7502F608	75K 1/6W 5 TA26
		R423	0RD1001F608	1.0K 1/6W 5 TA26
		R424	0RD1003F608	100K 1/6W 5 TA26
		R425	0RD7502F608	75K 1/6W 5 TA26
		R426	0RD1003F608	100K 1/6W 5 TA26
		R427	0RD1001F608	1.0K 1/6W 5 TA26
		R428	0RD7502F608	75K 1/6W 5 TA26
		R429	0RD1003F608	100K 1/6W 5 TA26
		R430	0RD1001F608	1.0K 1/6W 5 TA26
		R431	0RD7502F608	75K 1/6W 5 TA26
		R432	0RD1001F608	1.0K 1/6W 5 TA26
		R433	0RD1003F608	100K 1/6W 5 TA26
		R434	0RD5602F608	56K 1/6W 5 TA26
		R435	0RD1802F608	18K 1/6W 5 TA26
		R436	0RD5602F608	56K 1/6W 5 TA26
		R437	0RD1802F608	18K 1/6W 5 TA26
		R438	0RD5602F608	56K 1/6W 5 TA26
		R439	0RD1802F608	18K 1/6W 5 TA26
		R440	0RD5602F608	56K 1/6W 5 TA26
		R441	0RD1802F608	18K 1/6W 5 TA26
		R442	0RD4701F608	4.7K 1/6W 5 TA26
		R443	0RD1001F608	1.0K 1/6W 5 TA26
		R444	0RD1000F608	100 1/6W 5 TA26
		R445	0RD1000F608	100 1/6W 5 TA26
		R446	0RD3300F608	330 1/6W 5 TA26
		R501	0RD1002F608	10K 1/6W 5 TA26
		R502	0RD2201F608	2.2K 1/6W 5 TA26
		R503	0RD1502F608	15K 1/6W 5 TA26
		R504	0RD1002F608	10K 1/6W 5 TA26
		R505	0RD1003F608	100K 1/6W 5 TA26
		R506	0RD3301F608	3.3K 1/6W 5 TA26
		R507	0RD1003F608	100K 1/6W 5 TA26
		R508	0RD1001F608	1.0K 1/6W 5 TA26
		R509	0RD1001F608	1.0K 1/6W 5 TA26
		R510	0RD1000F608	100 1/6W 5 TA26
		R511	0RD1000F608	100 1/6W 5 TA26
		R512	0RD1004F608	1.0M 1/6W 5 TA26
		R513	0RD1002F608	10K 1/6W 5 TA26
		R514	0RD1002F608	10K 1/6W 5 TA26
		R515	0RD2201F608	2.2K 1/6W 5 TA26
		R516	0RD5600F608	560 1/6W 5 TA26
		R517	0RD5600F608	560 1/6W 5 TA26
		R518	0RD1001F608	1.0K 1/6W 5 TA26
		R519	0RD1004F608	1.0M 1/6W 5 TA26
		R520	0RD6803F608	680K 1/6W 5 TA26
		R521	0RD6800F608	680 1/6W 5 TA26
		R522	0RD2201F608	2.2K 1/6W 5 TA26
		R523	0RD8200F608	820 1/6W 5 TA26
		R524	0RD2701F608	2.7K 1/6W 5 TA26
		R525	0RD4701F608	4.7K 1/6W 5 TA26
		R526	0RD1001F608	1.0K 1/6W 5 TA26
		R527	0RN1001F408	1.0K 1/6W 1 TA26
		R528	0RD1004F608	1.0M 1/6W 5 TA26
		R529	0RD5600F608	560 1/6W 5 TA26
		R530	0RD1202F608	12K 1/6W 5 TA26
		R531	0RD4701F608	4.7K 1/6W 5 TA26
		R532	0RD3300F608	330 1/6W 5 TA26
		R533	0RD3300F608	330 1/6W 5 TA26
		R534	0RD1202F608	12K 1/6W 5 TA26
		R535	0RD2200F608	220 1/6W 5 TA26
		R536	0RD0332F608	33 1/6W 5 TA26
		R537	0RD3300F608	330 1/6W 5 TA26
		R538	0RD3300F608	330 1/6W 5 TA26
		R539	0RD4701F608	4.7K 1/6W 5 TA26
		R540	0RD1002F608	10K 1/6W 5 TA26
		R541	0RD5601F608	5.6K 1/6W 5 TA26
		R542	0RD1003F608	100K 1/6W 5 TA26
		R543	0RD4701F608	4.7K 1/6W 5 TA26
		R544	0RD1001F608	1.0K 1/6W 5 TA26
		R545	0RD1001F608	1.0K 1/6W 5 TA26
		R546	0RD1001F608	1.0K 1/6W 5 TA26
		R547	0RD2201F608	2.2K 1/6W 5 TA26
		R548	0RD2201F608	2.2K 1/6W 5 TA26
		R549	0RD1001F608	1.0K 1/6W 5 TA26
		R550	0RD3302F608	33K 1/6W 5 TA26
		R551	0RD2200F608	220 1/6W 5 TA26
		R552	0RD5601F608	5.6K 1/6W 5 TA26
		R553	0RD5601F608	5.6K 1/6W 5 TA26
		R554	0RD1003F608	100K 1/6W 5 TA26
		R555	0RD1001F608	1.0K 1/6W 5 TA26
		R556	0RD1001F608	1.0K 1/6W 5 TA26
		R557	0RD2702F608	27K 1/6W 5 TA26
		R558	0RD1001F608	1.0K 1/6W 5 TA26
		R559	0RD1202F608	12K 1/6W 5 TA26
		R560	0RD1001F608	1.0K 1/6W 5 TA26
		R561	0RD0102F608	10 1/6W 5 TA26
		R562	0RD2203F608	220K 1/6W 5 TA26
		R563	0RD1004F608	1.0M 1/6W 5 TA26
		R564	0RD4701F608	4.7K 1/6W 5 TA26
		R565	0RD4701F608	4.7K 1/6W 5 TA26
		R566	0RD4701F608	4.7K 1/6W 5 TA26
		R567	0RD4701F608	4.7K 1/6W 5 TA26
		R568	0RD1001F608	1.0K 1/6W 5 TA26
		R569	0RD1002F608	10K 1/6W 5 TA26
		R570	0RD1002F608	10K 1/6W 5 TA26
		R571	0RD1001F608	1.0K 1/6W 5 TA26
		R572	0RD1001F608	1.0K 1/6W 5 TA26
		R573	0RD1001F608	1.0K 1/6W 5 TA26
		R574	0RD1001F608	1.0K 1/6W 5 TA26
		R575	0RD1000F608	100 1/6W 5 TA26
		R576	0RD1000F608	100 1/6W 5 TA26
		R577	0RD6800F608	680 1/6W 5 TA26
		R578	0RD2200F608	220 1/6W 5 TA26
		R579	0RD6801F608	6.8K 1/6W 5 TA26
		R580	0RD4701F608	4.7K 1/6W 5 TA26
		R581	0RD1001F608	1.0K 1/6W 5 TA26
		R582	0RD1001F608	1.0K 1/6W 5 TA26
		R583	0RD8202F608	82K 1/6W 5 TA26
		R584	0RD1001F608	1.0K 1/6W 5 TA26
		R585	0RD2201F608	2.2K 1/6W 5 TA26
		R586	0RD2201F608	2.2K 1/6W 5 TA26
		R591	0RD5600F608	560 1/6W 5 TA26
		R592	0RD1001F608	1.0K 1/6W 5 TA26
		R593	0RD1001F608	1.0K 1/6W 5 TA26
		R594	0RD4701F608	4.7K 1/6W 5 TA26
		R595	0RD2203F608	220K 1/6W 5 TA26
		R596	0RD2200F608	220 1/6W 5 TA26
		R597	0RD3902F608	39K 1/6W 5 TA26
		R598	0RD1001F608	1.0K 1/6W 5 TA26
		R599	0RD4703F608	470K 1/6W 5 TA26
		R5A1	0RS0621K619	6.2 OHM 2 W 5% TR R T/P
		R5B1	0RD4701F608	4.7K 1/6W 5 TA26
		R5B2	0RD4701F608	4.7K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R5B3	0RD4701F608	4.7K 1/6W 5 TA26
		R5B4	0RD4701F608	4.7K 1/6W 5 TA26
		R5X0	0RD1004F608	1.0M 1/6W 5 TA26
		R5X1	0RD5603F608	560K 1/6W 5 TA26
		R5X2	0RD6801F608	6.8K 1/6W 5 TA26
		R5X3	0RD8202F608	82K 1/6W 5 TA26
		R5X4	0RD6801F608	6.8K 1/6W 5 TA26
		R5X5	0RD5603F608	560K 1/6W 5 TA26
		R5X6	0RD1000F608	100 1/6W 5 TA26
		R5X7	0RD1000F608	100 1/6W 5 TA26
		R5X8	0RD4700F608	470 1/6W 5 TA26
		R5X9	0RD1001F608	1.0K 1/6W 5 TA26
		R601	0RD4701F608	4.7K 1/6W 5 TA26
		R602	0RD8200F608	820 1/6W 5 TA26
		R603	0RD6800F608	680 1/6W 5 TA26
		R604	0RD1001F608	1.0K 1/6W 5 TA26
		R605	0RD1201F608	1.2K 1/6W 5 TA26
		R606	0RD1801F608	1.8K 1/6W 5 TA26
		R607	0RD2701F608	2.7K 1/6W 5 TA26
		R608	0RD4701F608	4.7K 1/6W 5 TA26
		R609	0RD1002F608	10K 1/6W 5 TA26
		R610	0RD8200F608	820 1/6W 5 TA26
		R612	0RD4701F608	4.7K 1/6W 5 TA26
		R614	0RD2702F608	27K 1/6W 5 TA26
		R615	0RD2702F608	27K 1/6W 5 TA26
		R618	0RD0752F608	75 1/6W 5 TA26
		R620	0RD2702F608	27K 1/6W 5 TA26
		R621	0RD2702F608	27K 1/6W 5 TA26
		R622	0RD2702F608	27K 1/6W 5 TA26
		R623	0RD2702F608	27K 1/6W 5 TA26
		R624	0RD2702F608	27K 1/6W 5 TA26
		R630	0RD3300F608	330 1/6W 5 TA26
		R631	0RD5602F608	56K 1/6W 5 TA26
		R632	0RD5602F608	56K 1/6W 5 TA26
		R633	0RD5602F608	56K 1/6W 5 TA26
		R634	0RD5602F608	56K 1/6W 5 TA26
		R635	0RD8200F608	820 1/6W 5 TA26
		R636	0RD3300F608	330 1/6W 5 TA26
		R637	0RD0332F608	33 1/6W 5 TA26
		R638	0RD0332F608	33 1/6W 5 TA26
		R639	0RD3300F608	330 1/6W 5 TA26
		R640	0RD3300F608	330 1/6W 5 TA26
		R641	0RD3300F608	330 1/6W 5 TA26
		R642	0RD3300F608	330 1/6W 5 TA26
		R643	0RD2702F608	27K 1/6W 5 TA26
		R644	0RD3901F608	3.9K 1/6W 5 TA26
		R645	0RD3300F608	330 1/6W 5 TA26
		R650	0RD1003F608	100K 1/6W 5 TA26
		R651	0RD1003F608	100K 1/6W 5 TA26
		R654	0RD0332F608	33 1/6W 5 TA26
		R655	0RD0332F608	33 1/6W 5 TA26
		R701	0RD1502F608	15K 1/6W 5 TA26
		R702	0RD1801F608	1.8K 1/6W 5 TA26
		R703	0RD3900F608	390 1/6W 5 TA26
		R704	0RD0682F608	68 1/6W 5 TA26
		R705	0RD1003F608	100K 1/6W 5 TA26
		R707	0RD4700F608	470 1/6W 5 TA26
		R708	0RD2202F608	22K 1/6W 5 TA26
		R709	0RD1003F608	100K 1/6W 5 TA26
		R710	0RD5601F608	5.6K 1/6W 5 TA26
		R711	0RD5601F608	5.6K 1/6W 5 TA26
		R712	0RD5601F608	5.6K 1/6W 5 TA26
		R713	0RD2200F608	220 1/6W 5 TA26
		R714	0RD1000F608	100 1/6W 5 TA26
		R716	0RD5601F608	5.6K 1/6W 5 TA26
		R717	0RD5601F608	5.6K 1/6W 5 TA26
		R720	0RD1202F608	12K 1/6W 5 TA26
		R721	0RD1502F608	15K 1/6W 5 TA26
		R722	0RD1202F608	12K 1/6W 5 TA26
		R723	0RD1202F608	12K 1/6W 5 TA26
		R724	0RD5600F608	560 1/6W 5 TA26
		R725	0RD5600F608	560 1/6W 5 TA26
		R727	0RD2201F608	2.2K 1/6W 5 TA26
		R728	0RD2702F608	27K 1/6W 5 TA26
		R7A2	0RD8200F608	820 1/6W 5 TA26
		R7A4	0RD1000F608	100 1/6W 5 TA26
		R7A5	0RD1000F608	100 1/6W 5 TA26
		R7A8	0RD4700F608	470 1/6W 5 TA26
		R7A9	0RD4700F608	470 1/6W 5 TA26
		R801	0RD1001F608	1.0K 1/6W 5 TA26
		R802	0RD4701F608	4.7K 1/6W 5 TA26
		R803	0RD1000F608	100 1/6W 5 TA26
		R804	0RD0122F608	12 1/6W 5 TA26
		R805	0RD1201F608	1.2K 1/6W 5 TA26
		R806	0RD1001F608	1.0K 1/6W 5 TA26
		R808	0RD1001F608	1.0K 1/6W 5 TA26
		R809	0RD8200F608	820 1/6W 5 TA26
		R810	0RD3902F608	39K 1/6W 5 TA26
		R811	0RD1003F608	100K 1/6W 5 TA26
		R901	0RD1001F608	1.0K 1/6W 5 TA26
		R902	0RD6802F608	68K 1/6W 5 TA26
		R903	0RD1802F608	18K 1/6W 5 TA26
		R904	0RD4700F608	470 1/6W 5 TA26
		R905	0RD6802F608	68K 1/6W 5 TA26
		R906	0RD1802F608	18K 1/6W 5 TA26
		R907	0RD1001F608	1.0K 1/6W 5 TA26
		R908	0RD0752F608	75 1/6W 5 TA26
		R909	0RD1003F608	100K 1/6W 5 TA26
		R910	0RD0752F608	75 1/6W 5 TA26
		R911	0RD3902F608	39K 1/6W 5 TA26
		R912	0RD2702F608	27K 1/6W 5 TA26
		R913	0RD0752F608	75 1/6W 5 TA26
		R914	0RD1001F608	1.0K 1/6W 5 TA26
		R915	0RD1001F608	1.0K 1/6W 5 TA26
		R916	0RD1001F608	1.0K 1/6W 5 TA26
		R917	0RD1001F608	1.0K 1/6W 5 TA26
		R918	0RD0752F608	75 1/6W 5 TA26
		R919	0RD1003F608	100K 1/6W 5 TA26
		R920	0RD1000F608	100 1/6W 5 TA26
		R921	0RD5600F608	560 1/6W 5 TA26
		R922	0RD5600F608	560 1/6W 5 TA26
		R923	0RD5600F608	560 1/6W 5 TA26
		R924	0RD5600F608	560 1/6W 5 TA26
		R925	0RD1000F608	100 1/6W 5 TA26
		RP01	614-007A	2.7/2W CEMENT SMPS V
		RP02	0RD4702F608	47K 1/6W 5 TA26
		RP03	0RD4702F608	47K 1/6W 5 TA26
		RP04	0RS0470K619	0.47OHM 2 W 5% TR
		RP07	0RD1800F608	180 1/6W 5 TA26
		RP08	0RD0752F608	75 1/6W 5 TA26
		RP09	0RD0222F608	22 1/6W 5 TA26
		RP10	0RD5101F608	5.1K 1/6W 5 TA26
		RP13	0RD1800F608	180 1/6W 5 TA26
		RP14	0RS5602K619	56KOHM 2 W 5% TR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		RP15	0RD2201F608	2.2K 1/6W 5 TA26
		RP16	0RN2701F408	2.70K 1/6W 1% TA26
		RP17	0RD3300F608	330 1/6W 5 TA26
		RP18	0RD1001F608	1.0K 1/6W 5 TA26
		RP19	0RN3301F408	3.3K 1/6W 1 TA26
		RP20	0RD0222F608	22 1/6W 5 TA26
		RP21	0RD1003F608	100K 1/6W 5 TA26
REMOCON RECEIVER				
		RC601	6712R1538GC	TSOP1238TB1 TEMIC 15 MM 37.9KH
SENSOR				
		ICP02	657-062B	PC123Y PHOTO-COUPLER(SARPH)
		S503	657-040B	REEL RPI-352Q01 D-27 ROHM-J
		S504	657-040B	REEL RPI-352Q01 D-27 ROHM-J
SWITCH				
		SH601	556-245D	SRGPTJ011A J/ALPS SHUTTLE 5V/1
		SW501	556-244A	REC S/W,MPU10105MMBO,MIC
		SW502	556-243D	F/L S/W,MPU10400(MIC),D-27
		SW601	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW602	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW603	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW604	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW607	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW608	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW609	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW610	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
TUNER				
		TU7A1	6700RP3P01B	VTDT5ED204 SHARP BG
VARIABLE RESISTOR				
	OR	VR501	613-029W	VARIABLE EVN-CYY A03BE5-220K
		VR501	613-032W	RH063MCJ5R (220K)
		VR701	6110RSHK01A	RH063LCS3R,4.7K,ANGLE VR
CRYSTAL				
		X301	529-020P	4.433619MHZ 15PPM GRAY L=4.0
		X501	529-020I	10.000000MHZ 30PPM NO-TU L=4.0
		X502	529-001B	32.768KHZ 3*8,KDS
	OR	X502	529-001K	32.768KHZ SEIKO
		X503	529-022V	17.734476MHZ CL-12P 25PPM LEAD
		X701	529-020I	10.000000MHZ 30PPM NO-TU L=4.0
RESONATOR				
		X601	618-010A	CST4.00MGW-TF01S MURATA
ZENER DIODE				
		ZD102	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD111	0DZ130009AB	MTZ13C TP ROHM-K
		ZD112	0DZ130009AB	MTZ13C TP ROHM-K
		ZD401	0DZ100009FA	MTZ10-C T-77 10V TP,ROHM/K
		ZD501	0DZ750009DA	MTZ7.5B TP ROHM-K
		ZD502	0DZ750009DA	MTZ7.5B TP ROHM-K
		ZD503	0DZ750009DA	MTZ7.5B TP ROHM-K
		ZD504	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD505	0DZ620009AA	MTZ6.2B (TA)
		ZD601	0DZ120009CA	MTZ12B TP ROHM-K
		ZD602	0DZ120009CA	MTZ12B TP ROHM-K
		ZD603	0DZ120009CA	MTZ12B TP ROHM-K
		ZD604	0DZ120009CA	MTZ12B TP ROHM-K
		ZD605	0DZ120009CA	MTZ12B TP ROHM-K
		ZD606	0DZ120009CA	MTZ12B TP ROHM-K
		ZD610	0DZ270009CA	MTZ27C TP ROHM-KOREA
		ZD611	0DZ510009EB	MTZ5.1B 0.5W TP ROHM-K
		ZD7A1	0DZ330009AF	MTZ33B,TP,ROHM-K
		ZD901	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD902	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD903	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD904	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD905	0DZ620009AA	MTZ6.2B (TA)
		ZD906	0DZ620009AA	MTZ6.2B (TA)
		ZD909	0DZ150009BC	MTZ15B ROHM-K
		ZD910	0DZ150009BC	MTZ15B ROHM-K
		ZD911	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD912	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD913	0DZ150009BC	MTZ15B ROHM-K
		ZD914	0DZ150009BC	MTZ15B ROHM-K
		ZDP03	0DZ220009ED	MTZ22B T-77 TP ROHM
		ZDP06	0DZ180009CA	MTZ18B TP ROHM-K

SECTION 5 REPLACEMENT PARTS LIST

· Mechanical Section MODEL:N919P

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
ASSEMBLY PARTS SECTION						
		A00	6721R-0048B	DECK ASSY	D-27U (P, 4HF)	
		A01	6723R-0052B	DRUM ASSY	(4P6) 6CH LI (PAL HI-FI NORMA)	
	OR	A01	6723R-B052B	DRUM(CIRC) ASSY	(4P6) 6CH LI (PAL HIFI)	
	OR	A01	6723R-F052B	DRUM ASSY	6CH LI(PAL HI-FI NORMAL) 4P6	
		A02	225-361A	BASE	ASSY P2	
		A03	225-364A	BASE	ASSY P3	
		A04	386-394A	ARM	ASSY CLEANER	
		A05	386-405B	ARM	ASSY T/UP	
		A06	4811R-0004U	BRACKET ASSY	L/D MOTOR (D-27U/ NEW PWB)	
	OR	A07	340-070A	HOLDER	ASSY PINCH	
		A07	340-195A	HOLDER	ASSY PINCH	
		A09	435-435A	GEAR	ASSY P2	
		A10	435-437A	GEAR	ASSY P3	
		A12	333-329A	LEVER	ASSY TENSION	
		A13	328-075A	BAND	ASSY TENSION	NSP
		A14	4811R-0010B	BRACKET ASSY	CAM	
		A20	3661R-0001A	HOUSING ASSY	D-27	
		A21	4931R-0004A	HOLDER ASSY	CST	
		A22	4811R-0002A	BRACKET ASSY	SIDE(R)	
PARTS SECTION						
		001	6723R-0057B	DRUM ASSY	SUB 6CH LI (PAL HI-FI NORMAL)	
	OR	002	414-217B	MOTOR	ASSY DRUM E20XL20 D27 SANKYO	
		002	4680RB0002A	MOTOR(MECH)	GVD-027U D-27U DRUM LGEC	
		003	311-011A	CHASSIS ASSY'	D27	NSP
		004	225-362A	BASE	SUB ASSY P2	NSP
		006	225-368A	BASE	DRUM	
		007	225-371E	BASE	ASSY A/C (LGEC VE)	
		008	523-833A	HEAD	FE HVFHU0010AK ALPS	
		010	225-365A	BASE	SUB ASSY P3	NSP
		012	225-399A	BASE	ASSY BRUSH	
		013	386-395A	ARM	CLEANER	NSP
		014	324-835B	HOLDER	ASSY CLEANER	NSP
		015	386-392A	ARM	ASSY TENSION	
		020	442-640A	SPRING	TENSION	
		021	456-070A	REEL	S27	
		022	456-071A	REEL	T27	
		025	340-008A	HOLDER	BAND(C)	NSP
		026	333-330A	LEVER	TENSION	NSP
		030	4421R-0002A	BRAKE ASSY	SUPPLY (U)	
		031	338-114B	BRAKE ASSY	T/UP (U)	
		032	442-655A	SPRING	MB	
		035	316-019A	BODY	PRISM LED	
		036	257-071A	PLATE	UP	
		040	435-441A	GEAR	PINCH CAM	
		041	435-440A	GEAR	PINCH	
		042	435-439A	GEAR	CNT	
		043	386-404B	ARM	SUB ASSY T/UP	

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		044	442-650A	SPRING	T/UP	NSP
		045	321-669A	BRACKET	L/D MOTOR	
		046	414-199B	MOTOR	ASSY L/D	
		047	4422R-0001A	WORM	L/D MOTOR	
		048	437-020A	WORM	WHEEL	
		050	4261R-0002A	ARM ASSY!	PINCH (D/C)	
		051	340-073A	HOLDER	SUB ASSY PINCH	
		053	4510R-0010A	LEVER	F/R (U)	
		055	442-649A	SPRING	PINCH	NSP
		056	333-334A	LEVER	ASSY P2	NSP
		057	4260R-0007A	ARM	F/R	
		060	435-436A	GEAR	P2	NSP
		061	442-647A	SPRING	P2	NSP
		062	333-336A	LEVER	ASSY P3	NSP
		063	435-438A	GEAR	P3	NSP
		064	442-648A	SPRING	P3	NSP
		065	435-442A	GEAR	P/S	
		066	3300R-0123A	PLATE	SLIDER(U)	
		070	337-007B	CLUTCH	ASSY S27	
		071	337-008A	CLUTCH	ASSY T27	
		072	386-396A	ARM	ASSY IDLER	
		073	442-644A	SPRING	UP/D	
		074	434-173A	ROLLER	ASSY GUIDE	
	OR	074	434-173C	ROLLER	ASSY GUIDE	
	OR	074	434-173D	ROLLER	ASSY GUIDE(DAI YANG)	
		075	435-433A	GEAR	CAM L/D	
		076	556-252B	SWITCH	MODE S/W(D-27),HMW0840-01,HOSI	
		077	435-432C	GEAR	PULLEY	
		080	442-656A	SPRING	H1	
		081	435-443A	GEAR	H1	
		082	333-339A	LEVER	H1	
		083	435-444A	GEAR	H-2	
		084	4680RA0001C	MOTOR(MECH)	GVC-027UA CAPSTAN LGEC	
		086	452-062A	BELT	CAPSTAN D74.6XT2.1	
		090	4810R-0043A	BRACKET	CAM (B/T)	
		091	4510R-0008A	LEVER	JOG (W/O SPRING)	
		092	435-434A	GEAR	JOG	
		093	442-646A	SPRING	JOG	
		095	333-338A	LEVER	TAB	
		096	442-652A	SPRING	TAB	
		100	3300R-0032A	PLATE	TOP	
		101	386-407A	ARM	ASSY F/L	
		102	4930R-0013A	HOLDER	CST	NSP
		103	4930R-0012A	HOLDER	BRACKET(R)	NSP
		104	4510R-0002A	LEVER	STOPPER(R)	NSP
		105	4930R-0011A	HOLDER	BRACKET(L)	NSP
		106	4510R-0001A	LEVER	STOPPER(L)	NSP
		107	4810R-0005A	BRACKET	SIDE(L)	
		111	442-659A	SPRING	STOPPER	NSP
		112	442-660A	SPRING	RELEASE	NSP
		113	4810R-0006A	BRACKET	SIDE(R)	NSP
		114	435-467A	GEAR	CAM F/L	NSP
		115	435-466A	GEAR	CONNECT	NSP
		120	333-342A	LEVER	SWITCH	NSP
		121	442-661A	SPRING	SWITCH	NSP

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		122	3300R-0006A	PLATE	COVER	NSP
		123	4974R-0006A	GUIDE	CST	
		126	465-040A	OPENER	DOOR	NSP
		130	257-075A	PLATE	GROUND	NSP
		131	257-106A	PLATE	REFLECTOR	NSP
		132	3300R-0033A	PLATE	GROUND(L)	NSP
				SCREW		
		401	1MPK0261718	SCREW MACHINE,PAN HEAD	+,- D2.6 L5.0 MSWR3/FZY	
		405	1MDC0262818	PAN HEAD MACHINE SCREW P/WASH+	D2.6 L12 MSWR3/FZY	
		406	1MEC0302018	PAN HEAD MACHINE SCREW S/W +	D 3.0 L 6.0 MSWR3/FZY	
		408	1MBC0302418	BINDING HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		411	353-046B	SCREW	SPECIAL (3X8 FZMY)	
		421	1MPC0302618	PAN HEAD MACHINE SCREW +!	D3.0 L10.0,MSWR3/FZY	
		426	1MPC0302018	PAN HEAD MACHINE SCREW +!	D 3.0 L 6.0 MSWR3/FZY	
		427	353-054B	SCREW	MINIATURE	
		428	353-221A	SCREW	M3-L15	
		429	353-046A	SCREW	SPECIAL (3X6 FZMY)	
				NUT, WASHER		
		504	354-001B	WASHER	P.S D3.1XD6X0.5T	
		511	354-080C	WASHER	STOPPER	
		518	354-128A	WASHER	STOPPER	
		519	354-128B	WASHER	STOPPER	

· Cabinet & Main Frame Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
				ASSEMBLY PARTS SECTION		
		A40	315-348X	FRAME ASSY	ASSY MAIN(PAL HI-FI)	NSP
		A42	6871R-1076D	PWB(PCB) ASSY	TIMER(N919P 3GL1L)	
		A43	3721R-F081J	PANEL ASSY,FRONT[NORMAL PARTS]	N919P 3GL1L	
		A46	3501R-1075B	BOARD ASSY	MAIN	
				PARTS SECTION		
		250	3110R-0054S	CASE	TOP	
		260	315-347Q	FRAME	MAIN	NSP
		265	324-995A	HOLDER	PWB	
		268	255-359A	PLATE	SIDE GND	
		277	4941R-Z009C	KNOB ASSY	SHUTTLE	
		280	3720R-F047X	PANEL	FRONT	NSP
		283	3580R-0028X	DOOR	CST	
		284	442-681A	SPRING	DOOR	
		300	6410RCH002B	POWER CORD	DW5000E(FILTER)CNT DONGWON VDE	
	OR	300	681-051C	CORD	KKP-419J/B-172, KLCE-2F,CNT	
		309	321-714A	BRACKET	HOUSING	
		320	3721R-D012M	PANEL ASSY,DISTRIBUTOR[NORMAL	N909P HIFI-EUROAV1_2	
		323	3111R-0065A	CASE ASSY	P-AMP	

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		330	220-050A	COVER	BOTTOM	
				SCREW		
		452	353-051A	SCREW	SPECIAL	
		462	353-136A	SCREW	SPECIAL(FBK) (353S353A)	
		463	1MBC0302418	BINDING HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		472	353-051E	SCREW	SPECIAL (3X12)	

· Packing Accessory Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		801	3835RP0026R	INSTRUCTION ASSY	N909P 3GL1L	
		802	3890R-H123A	BOX	N919P 3GL1L SW3-A 0.921 2 FLX	
		803	3920R-0048A	PACKING	E,PS	
	OR	804	292-053A	BAG	SOFT(VCP)	NSP
		804	3858R-0006A	SHEET	ROLL(W630XL300MX0.5T)	NSP
		806	861-033B	CABLE SET ASSY	RF-CABLE ASSY FTZ (D.D)	
		808	534-002C	BATTERY	1.5V AAM UM-3 LOL 1PAIR	
		810	861-520B	CABLE ASSY	SHORT TERMINAL	
		811	564-017L	PLUG ASSY	PHONE CORD 1WAY (YL)	
		812	564-018M	PLUG ASSY	P/CORD 2WAY(RD/WH)	

· Remote Control Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		900	6711R1P013W	REMOTE CONTROLLER ASSY	N1	

· Fixture Section

RUN DATE : 98.09.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		FIX1	6871R-0288W	PWB(PCB) ASSY	FIXTURE(D-27U CAPSTAN)	
		FIX2	6871R-0288B	PWB ASSY!	D-27 JIG	
		FIX3	6871R-0288D	PWB ASSY!	D-27 JIG	
		FIX4	6871R-0288E	PWB ASSY!	D-27 JIG	
		FIX5	322-065A	SUPPORTER	DECK SVC	

· Electrical Section

RUN DATE : 98.09.14

CAUTION: The * marks in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the SAFETY PRECAUTIONS and SERVICING PRECAUTIONS in the manual. Do not degrade the safety of the unit through improper servicing.

Tolerance

Symbol	C	J	K	M	N	Z	P	A
%	±2	±5	±10	±20	±30	+80 -20	+100 -10	+100 -10

CC, CJ, CK: Capacitor, Ceramic
CE: Capacitor, Electrolytic
CQ: Capacitor, Polyester

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
			CAPACITOR	
		C106	0CE1064K638	10M SRA 50V M FM5 TP(5)
		C110	0CN1040K948	0.1M 50V Z F TA26
		C111	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C141	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C301	0CN1030F678	0.01M 16V M Y TA26
		C302	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C303	0CN1040K948	0.1M 50V Z F TA26
		C304	0CN2230H948	0.022M 25V Z F TA26
		C305	0CE4775C638	470M SR 6.3V M FM5 TP(5)
		C306	0CN1040K948	0.1M 50V Z F TA26
		C307	0CN1030F678	0.01M 16V M Y TA26
		C308	0CN1040K948	0.1M 50V Z F TA26
		C309	0CN1030F678	0.01M 16V M Y TA26
		C310	0CN8220F668	8200P 16V M X TA26
		C311	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C312	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C313	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C314	0CN2230H948	0.022M 25V Z F TA26
		C315	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C316	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C317	0CN1030F678	0.01M 16V M Y TA26
		C318	0CN1040K948	0.1M 50V Z F TA26
		C319	0CN1040K948	0.1M 50V Z F TA26
		C320	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C321	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C322	0CX1000K408	10P 50V J SL TA26
		C323	0CN1810K518	180P 50V K B TA26
		C324	0CN1040K948	0.1M 50V Z F TA26
		C325	0CN1030F678	0.01M 16V M Y TA26
		C326	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C327	0CN1020K518	1000P 50V K B TA26
		C328	0CN1030F678	0.01M 16V M Y TA26
		C329	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C330	0CN2230H948	0.022M 25V Z F TA26
		C331	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C332	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C333	0CC3900K415	39P 50V J NPO TP
		C334	0CN1810K518	180P 50V K B TA26
		C335	0CE2244K638	0.22M SRA 50V M FM5 TP(5)
		C336	0CX5600K408	56P 50V J SL TA26
		C337	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C338	0CN2230H948	0.022M 25V Z F TA26
		C339	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C340	0CN1040K948	0.1M 50V Z F TA26
		C341	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C342	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C343	0CN4730K948	0.047M 50V Z F TA26
		C344	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C345	0CN8200K518	82PF 50V K B TA26
		C346	0CN1030F678	0.01M 16V M Y TA26
		C351	0CN1040K948	0.1M 50V Z F TA26
		C353	0CN3920F668	3900P 16V M X TA26
		C354	0CE2264F638	22M SRA 16V M FM5 TP(5)
		C355	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C356	0CN1030F678	0.01M 16V M Y TA26
		C357	0CN1220F668	1200P 16V M X TA26
		C358	0CN1020K518	1000P 50V K B TA26
		C359	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C360	0CQ1532K409	0.015UF S 50V J PE TP
		C361	0CQ3332K409	0.033UF S 50V J PE TP
		C362	0CN2230H948	0.022M 25V Z F TA26
		C363	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C364	0CE2264F638	22M SRA 16V M FM5 TP(5)
		C365	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C366	0CN1040K948	0.1M 50V Z F TA26
		C367	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C369	0CE3364F638	33M SRA 16V M FM5 TP(5)
		C370	0CQ1532K409	0.015UF S 50V J PE TP
		C371	0CN1030F678	0.01M 16V M Y TA26
		C372	0CQ2232K409	0.022UF S 50V J PE TP
		C373	0CN6810K518	680P 50V K B TA26
		C401	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C402	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C403	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C404	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C405	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C406	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C407	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C408	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C409	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C410	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C411	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C412	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C413	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C414	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C415	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C417	0CN2230H948	0.022M 25V Z F TA26
		C418	0CN1040K948	0.1M 50V Z F TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C419	0CN4720F668	4700P 16V M X TA26
		C420	0CE4766F638	47M SMS 16V M FM5 TP5
		C421	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C422	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C423	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C424	0CE4766F638	47M SMS 16V M FM5 TP5
		C425	0CN4720F668	4700P 16V M X TA26
		C426	0CN1040K948	0.1M 50V Z F TA26
		C427	0CN2230H948	0.022M 25V Z F TA26
		C428	0CE4766F638	47M SMS 16V M FM5 TP5
		C429	0CN2230H948	0.022M 25V Z F TA26
		C430	0CE4766F638	47M SMS 16V M FM5 TP5
		C431	0CN1030F678	0.01M 16V M Y TA26
		C432	0CE4744K638	0.47M SRA 50V M FM5 TP(5)
		C433	0CE4766F638	47M SMS 16V M FM5 TP5
		C434	0CN1810K518	180P 50V K B TA26
		C435	0CN1040K948	0.1M 50V Z F TA26
		C436	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C437	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C438	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C439	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C440	0CN2230H948	0.022M 25V Z F TA26
		C441	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C442	0CX4700K408	47P 50V J SL TA26
		C443	0CE4766F638	47M SMS 16V M FM5 TP5
		C444	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C501	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C502	0CN1020K518	1000P 50V K B TA26
		C503	0CN2230H948	0.022M 25V Z F TA26
		C504	0CN1030F678	0.01M 16V M Y TA26
		C505	0CC1200K415	12P 50V J NP0 TS
		C506	0CC1200K415	12P 50V J NP0 TS
		C507	0CN1040K948	0.1M 50V Z F TA26
		C508	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C509	0CN2230H948	0.022M 25V Z F TA26
		C510	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C511	0CN2230H948	0.022M 25V Z F TA26
		C513	0CE1074F638	100U SRA 16V M FM5 TP(5)
		C514	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C515	0CN1020K518	1000P 50V K B TA26
		C516	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C517	0CN2230H948	0.022M 25V Z F TA26
		C518	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C519	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C520	0CN1040K948	0.1M 50V Z F TA26
		C521	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C522	0CN1020K518	1000P 50V K B TA26
		C523	0CE3364F638	33M SRA 16V M FM5 TP(5)
		C524	0CN2220F668	2200P 16V M X TA26
		C525	0CN1810K518	180P 50V K B TA26
		C526	0CN5610K518	560P 50V K B TA26
		C528	0CN1020K518	1000P 50V K B TA26
		C529	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C530	0CE4753K638	4.7M SRE 50V M FM5 TP(5)
		C531	0CN1040K948	0.1M ·50V Z F TA26
		C532	0CN1810K518	180P 50V K B TA26
		C533	0CX3900K408	39P 50V J SL TA26
		C534	0CN2230H948	0.022M 25V Z F TA26
		C535	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C536	*0CN1030F678*	*0.01M 16V M Y TA26*
		C537	0CC3300K415	33P 50V J NP0 TP
		C538	0CN1030F678	0.01M 16V M Y TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C539	0CN1030F678	0.01M 16V M Y TA26
		C540	0CN1030F678	0.01M 16V M Y TA26
		C541	0CN2230H948	0.022M 25V Z F TA26
		C542	0CN2230H948	0.022M 25V Z F TA26
		C543	0CN1030F678	0.01M 16V M Y TA26
		C544	0CN1020K518	1000P 50V K B TA26
		C545	0CN1020K518	1000P 50V K B TA26
		C546	0CQ4732K409	0.047UF S 50V J PE TP
		C547	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C548	0CN2230H948	0.022M 25V Z F TA26
		C549	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C550	0CC1800K415	18P 50V J NP0 TS
		C551	0CC1800K415	18P 50V J NP0 TS
		C552	0CC1500K415	15P 50V J NP0 TS
		C553	0CC1500K415	15P 50V J NP0 TS
		C554	0CE4764H638	47M SRA 25V M FM5 TP(5)
		C555	0CN1030F678	0.01M 16V M Y TA26
		C556	0CQ3332K409	0.033UF S 50V J PE TP
		C557	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C558	0CN1040K948	0.1M 50V Z F TA26
		C559	0CN1030F678	0.01M 16V M Y TA26
		C560	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C561	0CN2230H948	0.022M 25V Z F TA26
		C563	0CN1040K948	0.1M 50V Z F TA26
		C564	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C565	0CN2230H948	0.022M 25V Z F TA26
		C566	0CN1030F678	0.01M 16V M Y TA26
		C567	0CN6810K518	680P 50V K B TA26
		C569	0CC3300K415	33P 50V J NP0 TP
		C570	0CN1020K518	1000P 50V K B TA26
		C571	0CN1040K948	0.1M 50V Z F TA26
		C590	0CN1040K948	0.1M 50V Z F TA26
		C5X1	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C5X2	0CN2230H948	0.022M 25V Z F TA26
		C5X4	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C5X7	0CQ4732K409	0.047UF S 50V J PE TP
		C5X8	0CQ4732K409	0.047UF S 50V J PE TP
		C601	0CN1040K948	0.1M 50V Z F TA26
		C603	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C604	0CN1030F678	0.01M 16V M Y TA26
		C606	0CN1010K518	100P 50V K B TA26
		C608	0CN1010K518	100P 50V K B TA26
		C609	0CN2230H948	0.022M 25V Z F TA26
		C610	0CN1020K518	1000P 50V K B TA26
		C611	0CN1020K518	1000P 50V K B TA26
		C612	0CE1064K638	10M SRA 50V M FM5 TP(5)
		C613	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C614	0CN1030F678	0.01M 16V M Y TA26
		C617	0CN1040K948	0.1M 50V Z F TA26
		C701	0CX2400K408	24P 50V J SL TA26
		C702	0CX4700K408	47P 50V J SL TA26
		C704	0CN1030F678	0.01M 16V M Y TA26
		C705	0CN2230H948	0.022M 25V Z F TA26
		C706	0CE4766F638	47M SMS 16V M FM5 TP5
		C707	0CE4766F638	47M SMS 16V M FM5 TP5
		C708	0CN2230H948	0.022M 25V Z F TA26
		C710	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C711	0CQ1031N409	0.01UF 100V J PE TP
		C712	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C713	0CN1020K518	1000P 50V K B TA26
		C714	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C715	0CN1010K518	100P 50V K B TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C716	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C717	0CN2230H948	0.022M 25V Z F TA26
		C718	0CE4766F638	47M SMS 16V M FM5 TP5
		C719	0CE4766F638	47M SMS 16V M FM5 TP5
		C720	0CN2230H948	0.022M 25V Z F TA26
		C721	0CN2230H948	0.022M 25V Z F TA26
		C722	0CQ1231N409	0.012U 100V J POLY TP
		C723	0CQ1231N409	0.012U 100V J POLY TP
		C724	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C725	0CE2274C638	220M SRA 6.3V M FM5 TP(5)
		C726	0CN1030F678	0.01M 16V M Y TA26
		C727	0CN1040K948	0.1M 50V Z F TA26
		C728	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C729	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C730	0CQ3921N409	0.0039U 100V J POLY TP
		C731	0CX4700K408	47P 50V J SL TA26
		C732	0CE2254K638	2.2M SRA 50V M FM5 TP(5)
		C733	0CN2230H948	0.022M 25V Z F TA26
		C734	0CE4766F638	47M SMS 16V M FM5 TP5
		C735	0CN1020K518	1000P 50V K B TA26
		C736	0CN1020K518	1000P 50V K B TA26
		C7A1	0CE4754K638	4.7M SRA 50V M FM5 TP(5)
		C7A2	0CN1040K948	0.1M 50V Z F TA26
		C7A3	0CN2230H948	0.022M 25V Z F TA26
		C7A4	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C7A5	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C7A8	0CN2230H948	0.022M 25V Z F TA26
		C7A9	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C7C1	0CX3300K408	33P 50V J SL TA26
		C7C3	0CN1030F678	0.01M 16V M Y TA26
		C801	0CN1020K518	1000P 50V K B TA26
		C802	0CN1040K948	0.1M 50V Z F TA26
		C803	0CN1040K948	0.1M 50V Z F TA26
		C804	0CN1040K948	0.1M 50V Z F TA26
		C805	0CN1040K948	0.1M 50V Z F TA26
		C806	0CN1030F678	0.01M 16V M Y TA26
		C809	0CN1030F678	0.01M 16V M Y TA26
		C810	0CN1030F678	0.01M 16V M Y TA26
		C811	0CN2230H948	0.022M 25V Z F TA26
		C812	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C813	0CN1030F678	0.01M 16V M Y TA26
		C814	0CN1030F678	0.01M 16V M Y TA26
		C815	0CE3354K638	3.3M SRA 50V M FM5 TP(5)
		C816	0CN1040K948	0.1M 50V Z F TA26
		C817	0CN1030F678	0.01M 16V M Y TA26
		C818	0CN1040K948	0.1M 50V Z F TA26
		C819	0CN1030F678	0.01M 16V M Y TA26
		C820	0CN1030F678	0.01M 16V M Y TA26
		C821	0CN1030F678	0.01M 16V M Y TA26
		C822	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C823	0CN2230H948	0.022M 25V Z F TA26
		C824	0CN4730K948	0.047M 50V Z F TA26
		C901	0CN2230H948	0.022M 25V Z F TA26
		C902	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C903	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C904	0CN2230H948	0.022M 25V Z F TA26
		C905	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C906	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C907	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C908	0CE477CF638	470UF SHL TYPE 16V M FM5 TP 5
		C912	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C913	0CE1064F638	10M SRA 16V M FM5 TP(5)

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C914	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C915	0CN4710K518	470P 50V K B TA26
		C917	0CN4710K518	470P 50V K B TA26
		C919	0CN4710K518	470P 50V K B TA26
		C922	0CN4710K518	470P 50V K B TA26
		C924	0CN4710K518	470P 50V K B TA26
		C926	0CN4710K518	470P 50V K B TA26
		C931	0CN4710K518	470P 50V K B TA26
		C932	0CN1020K518	1000P 50V K B TA26
		C933	0CN1020K518	1000P 50V K B TA26
		C938	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C939	0CN1030F678	0.01M 16V M Y TA26
		CP03	624-088F	PCX2 275V 0.1UF,M(PILKO)
		CP05	0CG2210U610	220 PF 400V M B R(NK,AD,SD)
		CP06	624-082F	CE 68UF/400V SHLVN
		CP07	0CQ1042K409	0.1UF S 50V J PE TP
		CP09	0CQ5622K409	5600PF S 50V J PE TP
		CP10	0CQ1022K409	1000PF S 50V J PE TP
		CP11	0CE336BH638	33UF KME 25V M FM5 TP5
		CP12	0CQ4732K409	0.047UF S 50V J PE TP
		CP14	624-087A	HIGH-VOL 150P/1KV SMPS NEW-KOR
		CP15	0CQ1031Y502	0.0100UF 630V K PE FM10
		CP16	0CQ4732K409	0.047UF S 50V J PE TP
		CP17	624-085D	CE 47UF/50V KME (SMPS)
		CP18	624-082G	CE 470UF/25V SHL(10*12.5)T/P
		CP19	0CE108BF638	1000UF KME TYPE 16V M FM5 TP 5
		CP20	0CE3376D638	330UF SMS 10V M FM5 TP5
		CP21	624-085D	CE 47UF/50V KME (SMPS)
		CP22	0CE477BH638	470UF KME 25V M FM5 TP5
		CP24	0CG3320U642	3300 PF 400V M F FM (NK,AD,SD)
		CP25	0CE2276D638	220M SMS 10V M FM5 TP(5)
		CP28	624-088F	PCX2 275V 0.1UF,M(PILKO)

DIODE

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		BDP01	0DD160000DA	S1WBA60(1A 600V) SHIDENKEN
		D101	0DD133009AA	1SS133 DETECT,SW TP
		D301	0DD133009AA	1SS133 DETECT,SW TP
		D302	0DD133009AA	1SS133 DETECT,SW TP
		D509	0DD133009AA	1SS133 DETECT,SW TP
		D600	0DD133009AA	1SS133 DETECT,SW TP
		D613	0DD133009AA	1SS133 DETECT,SW TP
		D614	0DD133009AA	1SS133 DETECT,SW TP
		D616	0DD133009AA	1SS133 DETECT,SW TP
		D901	0DD133009AA	1SS133 DETECT,SW TP
		DP01	0DD221009AA	ERA22-10 KFLB,TP ,R T/P,FUJI
		DP02	0DD133009AA	1SS133 DETECT,SW TP
		DP05	0DD133009AA	1SS133 DETECT,SW TP
		DP07	0DD207000AB	2A07 2A RECT(T/S)P=12.5 F DELT
		DP08	0DD810040AA	ERC81-004L,FUJI L TYPE
		DP10	0DD010009AC	EU01W(R-FORM) TP SANKEN
		DP12	0DD010009AC	EU01W(R-FORM) TP SANKEN
		DP13	0DR310000AA	RU3YXLF-C1 BK SANKEN D4 100V 2
		DP17	0DD010009AC	EU01W(R-FORM) TP SANKEN

LEVEL METER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		DG601	6302R2P002A	SVV09SS11 Q 25&85 SAMSUNG 123G

FUSE

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		F101	585-011C	T 1.6A 250V S506

FILTER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		FL701	616-038E	CERAMIC SFT5.74MA
		FL702	616-038D	CERAMIC SFT5.5MA MURATA
		LP02	616-145H	SHT LFS2020V4-04350

IC

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		IC301	0IMA357000A	NN3570 100QFP BK PAL AVC MULTI
		IC401	0IPH960400A	TDA9604H 44QFP BK HIFI
	OR	IC402	0IGS324000A	GL324 (QUAD PUPLE OP AMP)
		IC402	0ISS324000B	KA324 OP AMP
		IC501	0IGS397729A	GMS3977-AA29F 100QFP BK MICOM
		IC502	0ISA164100A	LB1641(1-CH)MOTOR DRIV SANYO %
		IC503	0IAL241600B	AT24C16-10PC 8D EEPROM 16K
	OR	IC503	0INS241600B	NM24C16N 8D EEPROM(16K,IIC)
		IC504	0IKE703100A	KIA7031P 3P 3.1V RESET(TAPING)
		IC505	0IKE704200B	KIA7042P 3P 4.2V RESET(TAPING)
		IC5X1	0ISM565000A	SDA5650 DIP14 BK VPS+PDS
		IC601	0IMA125100A	MN12510 QFP44 FLP DRIVE
		IC701	0ITF286014A	U2860B DIP14 FM DEMOD
		IC702	0IPH984000A	TDA9840 ST MATRIX
		IC801	0IMA336900A	AN3369SB 36SOP BK 6CH PREAMP
		IC901	0ISG640000A	STV6400 S/W IC DIP
	OR	ICP01	0IFE531100A	FA5311P PWM IC (FUJI) DIP
		ICP01	0ISS755200A	KA7552 PWMIC 8DIP 30V
		ICP03	0ISS431000A	KA431AZ (LM431AZ)

JACK

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		JK601	572-034S	BJP-202(YL) BAEEUN ST,2P
		JK602	572-034R	BJP-202(WHITE) BAEEUN ST,2P
		JK603	572-034Q	BJP-202(RED) BAEEUN ST,2P
		JK901	572-036H	BJP 03-01-G BAEEUN 2 ANGLE WH-

COIL

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		08RA	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BCP02	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BCP03	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BD601	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BD602	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		BD901	636-004C	BEAD CORE BFS3550R2FD8,R T/P
		FL351	633-032K	BIAC OSC,1CHIP 5V(KS-75M)
		L301	0LR1000J025	100UH 5% 4X5 TR5
		L302	0LR1000J025	100UH 5% 4X5 TR5
		L303	0LR1000J025	100UH 5% 4X5 TR5
		L304	0LA0332K018	33M K 2.3X3.4 L5 TP
		L351	0LR1000J025	100UH 5% 4X5 TR5
		L352	0LR1000K035	100M K 6X6 L5 TP
		L353	0LR1502J045	0.015H J 6X7 L5 TP
		L354	0LR1000J025	100UH 5% 4X5 TR5
		L402	0LR1000J025	100UH 5% 4X5 TR5
		L403	0LR2200J025	220UH 5% 4X5 TR5
		L404	0LR5600J025	560UH 5% 4X5 TR5
		L405	0LR2200J025	220UH 5% 4X5 TR5
		L502	0LR1000J025	100UH 5% 4X5 TR5
		L503	0LR1000J025	100UH 5% 4X5 TR5
		L504	0LR1000J025	100UH 5% 4X5 TR5
		L505	635-027C	EL0405RA SKI150G-3 K-TDK 15UH
		L506	0LA0332K018	33M K 2.3X3.4 L5 TP
		L510	0LR1000J025	100UH 5% 4X5 TR5
		L5X1	0LR1000J025	100UH 5% 4X5 TR5
		L602	0LA1000K018	100M K 2.3X3.4 L5 TP
		L603	0LA1000K018	100M K 2.3X3.4 L5 TP
		L604	0LR1000J025	100UH 5% 4X5 TR5
		L701	0LR1000J025	100UH 5% 4X5 TR5
		L702	0LR1000J025	100UH 5% 4X5 TR5
		L703	0LR2201J045	2200M J 6X7 L5 TP
		L704	0LR1000J025	100UH 5% 4X5 TR5
		L705	0LR1000J025	100UH 5% 4X5 TR5
		L707	0LA0122K018	12M K 2.3X3.4 L5 TP
		L708	0LR1000J025	100UH 5% 4X5 TR5
		L7A2	0LR1000J025	100UH 5% 4X5 TR5
		L7A3	0LR0472J025	47UH 5% 4X5 TR5
		L801	0LR1000J025	100UH 5% 4X5 TR5
		L802	0LR8200J025	820UH 5% 4X5 TR5
		L803	0LR1000J025	100UH 5% 4X5 TR5
		L804	0LA0470K018	0.47M K 2.3X3.4 L5 TP
		L901	0LR1000J025	100UH 5% 4X5 TR5
		L902	0LR1000J025	100UH 5% 4X5 TR5
		L903	0LA1000K018	100M K 2.3X3.4 L5 TP
		L904	0LA1000K018	100M K 2.3X3.4 L5 TP
		L905	0LA1000K018	100M K 2.3X3.4 L5 TP
		L906	0LA1000K018	100M K 2.3X3.4 L5 TP
		L908	0LA1000K018	100M K 2.3X3.4 L5 TP
		L909	0LA1000K018	100M K 2.3X3.4 L5 TP
		L910	0LA1000K018	100M K 2.3X3.4 L5 TP
		L911	0LA1000K018	100M K 2.3X3.4 L5 TP
		L913	0LA1000K018	100M K 2.3X3.4 L5 TP
		L914	0LA1000K018	100M K 2.3X3.4 L5 TP
		LP03	633-088D	CHOCK ,20UH,LEAD CUT
		LP04	633-088D	CHOCK ,20UH,LEAD CUT

LED

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
	OR	LED501	0DL380000AB	GL-380 IR-LED D-27 SHARP
		LED501	0DL380009AA	GL380JTP IR LED D-27 TP SHARP
		LED601	0DL112000AK	DL-11S2GNS(SUPPER,GREEN,03)KOC
		LED602	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC

CONNECTOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		P6501	561-273A	GB150-21S-LS-H (GSC)

CIRCUIT BOARD ASSEMBLY

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		PBM00	6871R-1075B	MAIN
		PBNH00	6871R-1078A	A2/HIFI

TRANSFORMER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		PTP01	642-023H	S/W TRANS SHT-023H,DYT-023H

TRANSISTOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
	OR	FEP01	0TF266600AA	2SK2666 BK SHINDENKEN 900V 3A
		FEP01	0TF380000AA	SSSS3N80A BK SAMSUNG 800V 3A T
		Q102	0TR127309AA	KTA1273-TP-Y (KTA966A)KEC
		Q103	0TR127309AA	KTA1273-TP-Y (KTA966A)KEC
		Q104	0TR319909AF	KTC3199-BL MINI TP KEC
		Q112	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q113	0TR141409AA	KTD1414(TO220IS) CUTING TP KEC
		Q121	0TR103009AF	KRA103M-TP (KRA2203) KEC
		Q122	0TR103009AF	KRA103M-TP (KRA2203) KEC
		Q123	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q124	0TR319909AF	KTC3199-BL MINI TP KEC
		Q131	0TR319909AF	KTC3199-BL MINI TP KEC
	OR	Q132	0TR126809BA	KTA1268-BL TP KEC
		Q132	0TR709009AE	KSA709C-Y TP SAMSUNG T0-92
		Q301	0TR126709AC	KTA1267-GR MINI TP KEC
		Q351	0TR319909AF	KTC3199-BL MINI TP KEC
		Q352	0TR126709AC	KTA1267-GR MINI TP KEC
		Q353	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q354	0TR319909AF	KTC3199-BL MINI TP KEC
		Q355	0TR319909AF	KTC3199-BL MINI TP KEC
		Q401	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q402	0TR319909AF	KTC3199-BL MINI TP KEC
		Q403	0TR319909AF	KTC3199-BL MINI TP KEC
		Q404	0TR319909AF	KTC3199-BL MINI TP KEC
		Q405	0TR103009AF	KRA103M-TP (KRA2203) KEC
		Q406	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q501	0TR126709AC	KTA1267-GR MINI TP KEC
		Q502	0TR319909AF	KTC3199-BL MINI TP KEC
		Q503	0TR933009DB	STA933Y TP KOTECO
		Q504	0TR126709AC	KTA1267-GR MINI TP KEC
		Q505	0TR933009DB	STA933Y TP KOTECO
		Q506	0TR126709AC	KTA1267-GR MINI TP KEC
		Q507	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q509	0TR126709AC	KTA1267-GR MINI TP KEC
		Q510	0TR319909AF	KTC3199-BL MINI TP KEC
		Q511	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q512	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q513	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q515	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q519	0TR320509AB	KTC3205-TP-Y (KTC2236A)KEC
		Q521	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q5X1	0TR319909AF	KTC3199-BL MINI TP KEC
		Q601	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q602	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q603	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q604	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q605	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q701	0TR319909AF	KTC3199-BL MINI TP KEC
		Q702	0TR126709AC	KTA1267-GR MINI TP KEC
		Q703	0TR319909AF	KTC3199-BL MINI TP KEC
		Q704	0TR319909AF	KTC3199-BL MINI TP KEC
		Q801	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q802	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q901	0TR126709AC	KTA1267-GR MINI TP KEC
		Q902	0TR126709AC	KTA1267-GR MINI TP KEC
		Q903	0TR126709AC	KTA1267-GR MINI TP KEC
	OR	S501	0TR581100BA	ST5811-A,B
		S501	0TR581139AA	ST5811S3T TP
	OR	S502	0TR581100BA	ST5811-A,B
		S502	0TR581139AA	ST5811S3T TP

RESISTOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		L601	0RD0822F608	82 1/6W 5 TA26
		R102	0RD2700F608	270 1/6W 5 TA26
		R103	0RD2700F608	270 1/6W 5 TA26
		R104	0RD2700F608	270 1/6W 5 TA26
		R105	0RD2700F608	270 1/6W 5 TA26
		R106	0RD4700F608	470 1/6W 5 TA26
		R107	0RD4701F608	4.7K 1/6W 5 TA26
		R108	0RD6801F608	6.8K 1/6W 5 TA26
		R109	0RD1002F608	10K 1/6W 5 TA26
		R111	0RD1202F608	12K 1/6W 5 TA26
		R119	0RD1800F608	180 1/6W 5 TA26
		R122	0RD2201F608	2.2K 1/6W 5 TA26
		R123	0RD2201F608	2.2K 1/6W 5 TA26
		R125	0RD1202F608	12K 1/6W 5 TA26
		R126	0RD1202F608	12K 1/6W 5 TA26
		R131	0RD1001F608	1.0K 1/6W 5 TA26
		R132	0RD3302F608	33K 1/6W 5 TA26
		R144	0RD5600F608	560 1/6W 5 TA26
		R301	0RD1002F608	10K 1/6W 5 TA26
		R302	0RD1003F608	100K 1/6W 5 TA26
		R304	0RD1003F608	100K 1/6W 5 TA26
		R305	0RD1000F608	100 1/6W 5 TA26
		R306	0RD1000F608	100 1/6W 5 TA26
		R307	0RD1001F608	1.0K 1/6W 5 TA26
		R308	0RD2703F608	270K 1/6W 5 TA26
		R309	0RD1204F608	1.2M 1/6W 5 TA26
		R310	0RD1000F608	100 1/6W 5 TA26
		R311	0RD1200F608	120 1/6W 5 TA26
		R312	0RD2703F608	270K 1/6W 5 TA26
		R313	0RD2703F608	270K 1/6W 5 TA26
		R314	0RD5601F608	5.6K 1/6W 5 TA26
		R315	0RD1500F608	150 1/6W 5 TA26
		R318	0RD5600F608	560 1/6W 5 TA26
		R320	0RD1004F608	1.0M 1/6W 5 TA26
		R321	0RD1801F608	1.8K 1/6W 5 TA26
		R351	0RD1001F608	1.0K 1/6W 5 TA26
		R353	0RD3301F608	3.3K 1/6W 5 TA26
		R354	0RD1500F608	150 1/6W 5 TA26
		R355	0RD3303F608	330K 1/6W 5 TA26
		R356	0RD1202F608	12K 1/6W 5 TA26
		R357	0RD5100F608	510 1/6W 5 TA26
		R358	0RD3302F608	33K 1/6W 5 TA26
		R359	0RD2202F608	22K 1/6W 5 TA26
		R360	0RD2701F608	2.7K 1/6W 5 TA26
		R361	0RD2200F608	220 1/6W 5 TA26
		R362	0RD6800F608	680 1/6W 5 TA26
		R363	0RD2204F608	2.2M 1/6W 5 TA26
		R364	0RD1202F608	12K 1/6W 5 TA26
		R365	0RD5602F608	56K 1/6W 5 TA26
		R366	0RD1001F608	1.0K 1/6W 5 TA26
		R367	0RD0472F608	47 1/6W 5 TA26
		R368	0RD4701F608	4.7K 1/6W 5 TA26
		R369	0RD2701F608	2.7K 1/6W 5 TA26
		R370	0RD1002F608	10K 1/6W 5 TA26
		R371	0RD1502F608	15K 1/6W 5 TA26
		R372	0RD1001F608	1.0K 1/6W 5 TA26
		R373	0RD1502F608	15K 1/6W 5 TA26
		R374	0RD1001F608	1.0K 1/6W 5 TA26
		R401	0RD1002F608	10K 1/6W 5 TA26
		R402	0RD1502F608	15K 1/6W 5 TA26
		R403	0RD1002F608	10K 1/6W 5 TA26
		R404	0RD1502F608	15K 1/6W 5 TA26
		R405	0RD1002F608	10K 1/6W 5 TA26
		R406	0RD1502F608	15K 1/6W 5 TA26
		R407	0RD1002F608	10K 1/6W 5 TA26
		R408	0RD1502F608	15K 1/6W 5 TA26
		R409	0RD1001F608	1.0K 1/6W 5 TA26
		R410	0RD3304F608	3.3M 1/6W 5 TA26
		R412	0RD4702F608	47K 1/6W 5 TA26
		R413	0RD3901F608	3.9K 1/6W 5 TA26
		R414	0RD3902F608	39K 1/6W 5 TA26
		R415	0RD3901F608	3.9K 1/6W 5 TA26
		R416	0RD4702F608	47K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R417	0RD5600F608	560 1/6W 5 TA26
		R418	0RD1000F608	100 1/6W 5 TA26
		R419	0RD1000F608	100 1/6W 5 TA26
		R420	0RD1001F608	1.0K 1/6W 5 TA26
		R421	0RD1001F608	1.0K 1/6W 5 TA26
		R422	0RD7502F608	75K 1/6W 5 TA26
		R423	0RD1001F608	1.0K 1/6W 5 TA26
		R424	0RD1003F608	100K 1/6W 5 TA26
		R425	0RD7502F608	75K 1/6W 5 TA26
		R426	0RD1003F608	100K 1/6W 5 TA26
		R427	0RD1001F608	1.0K 1/6W 5 TA26
		R428	0RD7502F608	75K 1/6W 5 TA26
		R429	0RD1003F608	100K 1/6W 5 TA26
		R430	0RD1001F608	1.0K 1/6W 5 TA26
		R431	0RD7502F608	75K 1/6W 5 TA26
		R432	0RD1001F608	1.0K 1/6W 5 TA26
		R433	0RD1003F608	100K 1/6W 5 TA26
		R434	0RD5602F608	56K 1/6W 5 TA26
		R435	0RD1802F608	18K 1/6W 5 TA26
		R436	0RD5602F608	56K 1/6W 5 TA26
		R437	0RD1802F608	18K 1/6W 5 TA26
		R438	0RD5602F608	56K 1/6W 5 TA26
		R439	0RD1802F608	18K 1/6W 5 TA26
		R440	0RD5602F608	56K 1/6W 5 TA26
		R441	0RD1802F608	18K 1/6W 5 TA26
		R442	0RD4701F608	4.7K 1/6W 5 TA26
		R443	0RD1001F608	1.0K 1/6W 5 TA26
		R444	0RD1000F608	100 1/6W 5 TA26
		R445	0RD1000F608	100 1/6W 5 TA26
		R446	0RD3300F608	330 1/6W 5 TA26
		R501	0RD1002F608	10K 1/6W 5 TA26
		R502	0RD2201F608	2.2K 1/6W 5 TA26
		R503	0RD1502F608	15K 1/6W 5 TA26
		R504	0RD1002F608	10K 1/6W 5 TA26
		R505	0RD1003F608	100K 1/6W 5 TA26
		R506	0RD3301F608	3.3K 1/6W 5 TA26
		R507	0RD1003F608	100K 1/6W 5 TA26
		R508	0RD1001F608	1.0K 1/6W 5 TA26
		R509	0RD1001F608	1.0K 1/6W 5 TA26
		R510	0RD1000F608	100 1/6W 5 TA26
		R511	0RD1000F608	100 1/6W 5 TA26
		R512	0RD1004F608	1.0M 1/6W 5 TA26
		R513	0RD1002F608	10K 1/6W 5 TA26
		R514	0RD1002F608	10K 1/6W 5 TA26
		R515	0RD2201F608	2.2K 1/6W 5 TA26
		R516	0RD5600F608	560 1/6W 5 TA26
		R517	0RD5600F608	560 1/6W 5 TA26
		R518	0RD1001F608	1.0K 1/6W 5 TA26
		R519	0RD1004F608	1.0M 1/6W 5 TA26
		R520	0RD6803F608	680K 1/6W 5 TA26
		R521	0RD6800F608	680 1/6W 5 TA26
		R522	0RD2201F608	2.2K 1/6W 5 TA26
		R523	0RD8200F608	820 1/6W 5 TA26
		R524	0RD2701F608	2.7K 1/6W 5 TA26
		R525	0RD4701F608	4.7K 1/6W 5 TA26
		R526	0RD1001F608	1.0K 1/6W 5 TA26
		R527	0RN1001F408	1.0K 1/6W 1 TA26
		R528	0RD1004F608	1.0M 1/6W 5 TA26
		R529	0RD5600F608	560 1/6W 5 TA26
		R530	0RD1202F608	12K 1/6W 5 TA26
		R531	0RD4701F608	4.7K 1/6W 5 TA26
		R532	*0RD3300F608*	*330 1/6W 5 TA26*
		R533	0RD3300F608	330 1/6W 5 TA26
		R534	0RD1202F608	12K 1/6W 5 TA26
		R535	0RD2200F608	220 1/6W 5 TA26
		R536	0RD0332F608	33 1/6W 5 TA26
		R537	0RD3300F608	330 1/6W 5 TA26
		R538	0RD3300F608	330 1/6W 5 TA26
		R539	0RD4701F608	4.7K 1/6W 5 TA26
		R540	0RD1002F608	10K 1/6W 5 TA26
		R541	0RD5601F608	5.6K 1/6W 5 TA26
		R542	0RD1003F608	100K 1/6W 5 TA26
		R543	0RD4701F608	4.7K 1/6W 5 TA26
		R544	0RD1001F608	1.0K 1/6W 5 TA26
		R545	0RD1001F608	1.0K 1/6W 5 TA26
		R546	0RD1001F608	1.0K 1/6W 5 TA26
		R547	0RD2201F608	2.2K 1/6W 5 TA26
		R548	0RD2201F608	2.2K 1/6W 5 TA26
		R549	0RD1001F608	1.0K 1/6W 5 TA26
		R550	0RD3302F608	33K 1/6W 5 TA26
		R551	0RD2200F608	220 1/6W 5 TA26
		R552	0RD5601F608	5.6K 1/6W 5 TA26
		R553	0RD5601F608	5.6K 1/6W 5 TA26
		R554	0RD1003F608	100K 1/6W 5 TA26
		R555	0RD1001F608	1.0K 1/6W 5 TA26
		R556	0RD1001F608	1.0K 1/6W 5 TA26
		R557	0RD2702F608	27K 1/6W 5 TA26
		R558	0RD1001F608	1.0K 1/6W 5 TA26
		R559	0RD1202F608	12K 1/6W 5 TA26
		R560	0RD1001F608	1.0K 1/6W 5 TA26
		R561	0RD0102F608	10 1/6W 5 TA26
		R562	0RD2203F608	220K 1/6W 5 TA26
		R563	0RD1004F608	1.0M 1/6W 5 TA26
		R564	0RD4701F608	4.7K 1/6W 5 TA26
		R565	0RD4701F608	4.7K 1/6W 5 TA26
		R566	0RD4701F608	4.7K 1/6W 5 TA26
		R567	0RD4701F608	4.7K 1/6W 5 TA26
		R568	0RD1001F608	1.0K 1/6W 5 TA26
		R569	0RD1002F608	10K 1/6W 5 TA26
		R570	0RD1002F608	10K 1/6W 5 TA26
		R571	0RD1001F608	1.0K 1/6W 5 TA26
		R572	0RD1001F608	1.0K 1/6W 5 TA26
		R573	0RD1001F608	1.0K 1/6W 5 TA26
		R574	0RD1001F608	1.0K 1/6W 5 TA26
		R575	0RD1000F608	100 1/6W 5 TA26
		R576	0RD1000F608	100 1/6W 5 TA26
		R577	0RD6800F608	680 1/6W 5 TA26
		R578	0RD2200F608	220 1/6W 5 TA26
		R579	0RD6801F608	6.8K 1/6W 5 TA26
		R580	0RD4701F608	4.7K 1/6W 5 TA26
		R581	0RD1001F608	1.0K 1/6W 5 TA26
		R582	0RD1001F608	1.0K 1/6W 5 TA26
		R583	0RD8202F608	82K 1/6W 5 TA26
		R584	0RD1001F608	1.0K 1/6W 5 TA26
		R585	0RD2201F608	2.2K 1/6W 5 TA26
		R586	0RD2201F608	2.2K 1/6W 5 TA26
		R591	0RD5600F608	560 1/6W 5 TA26
		R592	0RD1001F608	1.0K 1/6W 5 TA26
		R593	0RD1001F608	1.0K 1/6W 5 TA26
		R594	0RD4701F608	4.7K 1/6W 5 TA26
		R595	0RD2203F608	220K 1/6W 5 TA26
		R596	0RD2200F608	220 1/6W 5 TA26
		R597	0RD3902F608	39K 1/6W 5 TA26
		R598	0RD1001F608	1.0K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R599	0RD4703F608	470K 1/6W 5 TA26
		R5A1	0RS0621K619	6.2 OHM 2 W 5% TR R T/P
		R5B1	0RD4701F608	4.7K 1/6W 5 TA26
		R5B2	0RD4701F608	4.7K 1/6W 5 TA26
		R5B3	0RD4701F608	4.7K 1/6W 5 TA26
		R5B4	0RD4701F608	4.7K 1/6W 5 TA26
		R5X0	0RD1004F608	1.0M 1/6W 5 TA26
		R5X1	0RD5603F608	560K 1/6W 5 TA26
		R5X2	0RD6801F608	6.8K 1/6W 5 TA26
		R5X3	0RD8202F608	82K 1/6W 5 TA26
		R5X4	0RD6801F608	6.8K 1/6W 5 TA26
		R5X5	0RD5603F608	560K 1/6W 5 TA26
		R5X6	0RD1000F608	100 1/6W 5 TA26
		R5X7	0RD1000F608	100 1/6W 5 TA26
		R5X8	0RD4700F608	470 1/6W 5 TA26
		R5X9	0RD1001F608	1.0K 1/6W 5 TA26
		R601	0RD4701F608	4.7K 1/6W 5 TA26
		R602	0RD8200F608	820 1/6W 5 TA26
		R603	0RD6800F608	680 1/6W 5 TA26
		R604	0RD1001F608	1.0K 1/6W 5 TA26
		R605	0RD1201F608	1.2K 1/6W 5 TA26
		R606	0RD1801F608	1.8K 1/6W 5 TA26
		R607	0RD2701F608	2.7K 1/6W 5 TA26
		R608	0RD4701F608	4.7K 1/6W 5 TA26
		R609	0RD1002F608	10K 1/6W 5 TA26
		R610	0RD8200F608	820 1/6W 5 TA26
		R612	0RD4701F608	4.7K 1/6W 5 TA26
		R614	0RD2702F608	27K 1/6W 5 TA26
		R615	0RD2702F608	27K 1/6W 5 TA26
		R618	0RD0752F608	75 1/6W 5 TA26
		R620	0RD2702F608	27K 1/6W 5 TA26
		R621	0RD2702F608	27K 1/6W 5 TA26
		R622	0RD2702F608	27K 1/6W 5 TA26
		R623	0RD2702F608	27K 1/6W 5 TA26
		R624	0RD2702F608	27K 1/6W 5 TA26
		R630	0RD3300F608	330 1/6W 5 TA26
		R631	0RD5602F608	56K 1/6W 5 TA26
		R632	0RD5602F608	56K 1/6W 5 TA26
		R633	0RD5602F608	56K 1/6W 5 TA26
		R634	0RD5602F608	56K 1/6W 5 TA26
		R635	0RD8200F608	820 1/6W 5 TA26
		R636	0RD3300F608	330 1/6W 5 TA26
		R637	0RD0332F608	33 1/6W 5 TA26
		R638	0RD0332F608	33 1/6W 5 TA26
		R639	0RD3300F608	330 1/6W 5 TA26
		R640	0RD3300F608	330 1/6W 5 TA26
		R641	0RD3300F608	330 1/6W 5 TA26
		R642	0RD3300F608	330 1/6W 5 TA26
		R643	0RD2702F608	27K 1/6W 5 TA26
		R644	0RD3901F608	3.9K 1/6W 5 TA26
		R645	0RD3300F608	330 1/6W 5 TA26
		R650	0RD1003F608	100K 1/6W 5 TA26
		R651	0RD1003F608	100K 1/6W 5 TA26
		R654	0RD0332F608	33 1/6W 5 TA26
		R655	0RD0332F608	33 1/6W 5 TA26
		R701	0RD1502F608	15K 1/6W 5 TA26
		R702	0RD1801F608	1.8K 1/6W 5 TA26
		R703	0RD3900F608	390 1/6W 5 TA26
		R704	0RD0682F608	68 1/6W 5 TA26
		R705	0RD1003F608	100K 1/6W 5 TA26
		R707	0RD4700F608	470 1/6W 5 TA26
		R708	0RD2202F608	22K 1/6W 5 TA26
		R709	0RD1003F608	100K 1/6W 5 TA26
		R710	0RD5601F608	5.6K 1/6W 5 TA26
		R711	0RD5601F608	5.6K 1/6W 5 TA26
		R712	0RD5601F608	5.6K 1/6W 5 TA26
		R713	0RD2200F608	220 1/6W 5 TA26
		R714	0RD1000F608	100 1/6W 5 TA26
		R716	0RD5601F608	5.6K 1/6W 5 TA26
		R717	0RD5601F608	5.6K 1/6W 5 TA26
		R720	0RD1202F608	12K 1/6W 5 TA26
		R721	0RD1502F608	15K 1/6W 5 TA26
		R722	0RD1202F608	12K 1/6W 5 TA26
		R723	0RD1202F608	12K 1/6W 5 TA26
		R724	0RD5600F608	560 1/6W 5 TA26
		R725	0RD5600F608	560 1/6W 5 TA26
		R727	0RD2201F608	2.2K 1/6W 5 TA26
		R728	0RD2702F608	27K 1/6W 5 TA26
		R7A2	0RD8200F608	820 1/6W 5 TA26
		R7A4	0RD1000F608	100 1/6W 5 TA26
		R7A5	0RD1000F608	100 1/6W 5 TA26
		R7A8	0RD4700F608	470 1/6W 5 TA26
		R7A9	0RD4700F608	470 1/6W 5 TA26
		R801	0RD1001F608	1.0K 1/6W 5 TA26
		R802	0RD4701F608	4.7K 1/6W 5 TA26
		R803	0RD1000F608	100 1/6W 5 TA26
		R804	0RD0122F608	12 1/6W 5 TA26
		R805	0RD1201F608	1.2K 1/6W 5 TA26
		R806	0RD1001F608	1.0K 1/6W 5 TA26
		R808	0RD1001F608	1.0K 1/6W 5 TA26
		R809	0RD8200F608	820 1/6W 5 TA26
		R810	0RD3902F608	39K 1/6W 5 TA26
		R811	0RD1003F608	100K 1/6W 5 TA26
		R901	0RD1001F608	1.0K 1/6W 5 TA26
		R902	0RD6802F608	68K 1/6W 5 TA26
		R903	0RD1802F608	18K 1/6W 5 TA26
		R904	0RD4700F608	470 1/6W 5 TA26
		R905	0RD6802F608	68K 1/6W 5 TA26
		R906	0RD1802F608	18K 1/6W 5 TA26
		R907	0RD1001F608	1.0K 1/6W 5 TA26
		R908	0RD0752F608	75 1/6W 5 TA26
		R909	0RD1003F608	100K 1/6W 5 TA26
		R910	0RD0752F608	75 1/6W 5 TA26
		R911	0RD3902F608	39K 1/6W 5 TA26
		R912	0RD2702F608	27K 1/6W 5 TA26
		R913	0RD0752F608	75 1/6W 5 TA26
		R914	0RD1001F608	1.0K 1/6W 5 TA26
		R915	0RD1001F608	1.0K 1/6W 5 TA26
		R916	0RD1001F608	1.0K 1/6W 5 TA26
		R917	0RD1001F608	1.0K 1/6W 5 TA26
		R918	0RD0752F608	75 1/6W 5 TA26
		R919	0RD1003F608	100K 1/6W 5 TA26
		R920	0RD1000F608	100 1/6W 5 TA26
		R921	0RD5600F608	560 1/6W 5 TA26
		R922	0RD5600F608	560 1/6W 5 TA26
		R923	0RD5600F608	560 1/6W 5 TA26
		R924	0RD5600F608	560 1/6W 5 TA26
		R925	0RD1000F608	100 1/6W 5 TA26
		RP01	614-007A	2.7/2W CEMENT SMPS V
		RP02	0RD4702F608	47K 1/6W 5 TA26
		RP03	0RD4702F608	47K 1/6W 5 TA26
		RP04	0RS0470K619	0.47OHM 2 W 5% TR
		RP07	0RD1800F608	180 1/6W 5 TA26
		RP08	0RD0752F608	75 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		RP09	0RD0222F608	22 1/6W 5 TA26
		RP10	0RD5101F608	5.1K 1/6W 5 TA26
		RP13	0RD1800F608	180 1/6W 5 TA26
		RP14	0RS5602K619	56KOHM 2 W 5% TR
		RP15	0RD2201F608	2.2K 1/6W 5 TA26
		RP16	0RN2701F408	2.70K 1/6W 1% TA26
		RP17	0RD3300F608	330 1/6W 5 TA26
		RP18	0RD1001F608	1.0K 1/6W 5 TA26
		RP19	0RN3301F408	3.3K 1/6W 1 TA26
		RP20	0RD0222F608	22 1/6W 5 TA26
		RP21	0RD1003F608	100K 1/6W 5 TA26

REMOCON RECEIVER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		RC601	6712R2038GB	TSOP1238GL1 TEMIC 20MM 37.9KHZ

SENSOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		ICP02	657-062B	PC123Y PHOTO-COUPLER(SARPH)
		S503	657-040B	REEL RPI-352Q01 D-27 ROHM-J
		S504	657-040B	REEL RPI-352Q01 D-27 ROHM-J

SWITCH

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		SH601	556-245C	SRGPTJ0201 J/ALPS G1602054M SH
		SW501	556-244A	REC S/W,MPU10105MMBO,MIC
		SW502	556-243D	F/L S/W,MPU10400(MIC),D-27
		SW601	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW602	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW603	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW604	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW608	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW609	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC
		SW610	556-282C	SKQNAED ALPS 5MM 12V/50MAV TAC

TUNER

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		TU7A1	6700RP3P01B	VTDT5ED204 SHARP BG

VARIABLE RESISTOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
	OR	VR501	613-029W	VARIABLE EVN-CYY A03BE5-220K
		VR501	613-032W	RH063MCJ5R (220K)
		VR701	6110RSHK01A	RH063LCS3R,4.7K,ANGLE VR

CRYSTAL

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		X301	529-020P	4.433619MHZ 15PPM GRAY L=4.0
		X501	529-020I	10.000000MHZ 30PPM NO-TU L=4.0
		X502	529-001B	32.768KHZ 3*8,KDS
	OR	X502	529-001K	32.768KHZ SEIKO
		X503	529-022V	17.734476MHZ CL-12P 25PPM LEAD
		X701	529-020I	10.000000MHZ 30PPM NO-TU L=4.0

RESONATOR

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		X601	618-010A	CST4.00MGW-TF01S MURATA

ZENER DIODE

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		ZD102	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD111	0DZ130009AB	MTZ13C TP ROHM-K
		ZD112	0DZ130009AB	MTZ13C TP ROHM-K
		ZD401	0DZ100009FA	MTZ10-C T-77 10V TP,ROHM/K
		ZD501	0DZ750009DA	MTZ7.5B TP ROHM-K
		ZD502	0DZ750009DA	MTZ7.5B TP ROHM-K
		ZD503	0DZ750009DA	MTZ7.5B TP ROHM-K
		ZD504	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD505	0DZ620009AA	MTZ6.2B (TA)
		ZD601	0DZ120009CA	MTZ12B TP ROHM-K
		ZD602	0DZ120009CA	MTZ12B TP ROHM-K
		ZD603	0DZ120009CA	MTZ12B TP ROHM-K
		ZD604	0DZ120009CA	MTZ12B TP ROHM-K
		ZD605	0DZ120009CA	MTZ12B TP ROHM-K
		ZD606	0DZ120009CA	MTZ12B TP ROHM-K
		ZD610	0DZ270009CA	MTZ27C TP ROHM-KOREA
		ZD611	0DZ510009EB	MTZ5.1B 0.5W TP ROHM-K
		ZD7A1	0DZ330009AF	MTZ33B,TP,ROHM-K
		ZD901	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD902	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD903	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD904	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD905	0DZ620009AA	MTZ6.2B (TA)
		ZD906	0DZ620009AA	MTZ6.2B (TA)
		ZD909	0DZ150009BC	MTZ15B ROHM-K
		ZD910	0DZ150009BC	MTZ15B ROHM-K
		ZD911	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD912	0DZ560009CA	MTZ5.6B TP ROHM-K
		ZD913	0DZ150009BC	MTZ15B ROHM-K
		ZD914	0DZ150009BC	MTZ15B ROHM-K
		ZDP03	0DZ220009ED	MTZ22B T-77 TP ROHM
		ZDP06	0DZ180009CA	MTZ18B TP ROHM-K